

EXHIBIT 6

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UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>		Attorney Docket No. Avail0109-C3	
		First Named Inventor HAVEMOSE, Allan	
		Title SYSTEM AND METHOD FOR APPLICATION ISOLATION	
		Express Mail Label No. Filed via EFS	

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
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<ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Fee Transmittal Form (PTO/SB/17 or equivalent) 2. <input type="checkbox"/> Applicant asserts small entity status. See 37 CFR 1.27 3. <input type="checkbox"/> Applicant certifies micro entity status. See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent. 4. <input checked="" type="checkbox"/> Specification [Total Pages <u>23</u>] Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement) 5. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <u>10</u>] 6. Inventor's Oath or Declaration [Total Pages <u>1</u>] (including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e)) <ol style="list-style-type: none"> a. <input type="checkbox"/> Newly executed (original or copy) b. <input checked="" type="checkbox"/> A copy from a prior application (37 CFR 1.63(d)) 7. <input checked="" type="checkbox"/> Application Data Sheet * See note below. See 37 CFR 1.76 (PTO/AIA/14 or equivalent) 8. CD-ROM or CD-R in duplicate, large table, or Computer Program (Appendix) <div style="margin-left: 20px;"> <input type="checkbox"/> Landscape Table on CD </div> 9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. – c. are required) <ol style="list-style-type: none"> a. <input type="checkbox"/> Computer Readable Form (CRF) b. <input type="checkbox"/> Specification Sequence Listing on: <ol style="list-style-type: none"> i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> Paper c. <input type="checkbox"/> Statements verifying identity of above copies 	ACCOMPANYING APPLICATION PAPERS <ol style="list-style-type: none"> 10. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) Name of Assignee _____ 11. <input checked="" type="checkbox"/> 37 CFR 3.73(c) Statement <input checked="" type="checkbox"/> Power of Attorney (when there is an assignee) 12. <input type="checkbox"/> English Translation Document (if applicable) 13. <input type="checkbox"/> Information Disclosure Statement (PTO/SB/08 or PTO-1449) <div style="margin-left: 20px;"><input type="checkbox"/> Copies of citations attached</div> 14. <input type="checkbox"/> Preliminary Amendment 15. <input type="checkbox"/> Return Receipt Postcard (MPEP § 503) (Should be specifically itemized) 16. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed) 17. <input checked="" type="checkbox"/> Nonpublication Request Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 18. <input type="checkbox"/> Other: _____ _____ _____ _____
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 (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

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System and Method for Application Isolation

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. patent application Ser. No. 14/606,175, titled SYSTEM AND METHOD FOR APPLICATION ISOLATION, now issued U.S. patent number 9,336,045, issued on May 10, 2016, which is a continuation of U.S. patent application Ser. No. 13/708,477, titled SYSTEM AND METHOD FOR APPLICATION ISOLATION, now issued U.S. patent number 8,943,500, issued on January 27, 2015, which is a continuation of U.S. patent application Ser. No. 12/421,691, filed April 10, 2009, titled SYSTEM AND METHOD FOR APPLICATION ISOLATION, now issued patent No. 8,341,631, issued on December 25, 2012. The present application is related to commonly assigned U.S. patent application Ser. No. 12/334,654, filed December 15, 2008, titled METHOD AND SYSTEM FOR PROVIDING STORAGE CHECKPOINTING TO A GROUP OF INDEPENDENT COMPUTER APPLICATIONS, now issued U.S. patent number 8,880,473, issued on November 4, 2014 and U.S. patent application Ser. No. 12/334,660, filed December 15, 2008, titled METHOD AND SYSTEM FOR PROVIDING CHECKPOINTING TO WINDOWS APPLICATION GROUPS, now issued patent No. 9,286,109, issued on March 15, 2016, the disclosure of each of which is hereby incorporated by reference herein in their entirety.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not Applicable

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC

[0003] Not Applicable

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BACKGROUND OF THE INVENTION

1. Field of the Invention

[0005] This invention pertains generally to enterprise computer systems, computer networks, embedded computer systems, wireless devices such as cell phones, computer systems, and more particularly to methods, systems and procedures (i.e., programming) for providing application isolation for multiple applications running on a host operating system.

2. Description of Related Art

[0006] In many environments one of the most important features is to ensure that one running application doesn't affect other running applications, and that the crash of one application doesn't compromise other running applications. In many environments applications share system resources, libraries and hardware, which exposes subtle interconnects between seemingly unrelated applications.

[0007] Several approaches have been developed addressing this fundamental problem. The first level of application isolation is provided by the operating system. Modern operating systems such as Linux, UNIX, Windows2000, NT, XP and Vista provide some level of application isolation through the use of processes, and the underlying hardware memory management unit. The use of processes generally ensure that one running application process cannot address memory owned and used by other processes. This first level of isolation does not address the use of shared resources, such as files, file systems, shared memory, and libraries, so other approaches have been developed

[0008] In US 6,496,847 Bugnion et al. teach the use of a virtual machine monitor (VMM) with a protected host operating system (HOS). This invention partially solves the

isolation problem by placing every application into its own VMM. The solution requires the use of a VMM subsystem and in some cases a customized operating system. US 6,496,847 does not provide isolation at the level of individual applications, but for entire operating systems with all the applications within it. It does not address the problem of application isolation with multiple natively running applications on one host computer.

[0009] In US 6,601,081 Provino et al. teach the use of a virtual machine for a plurality of application programs. As with 6,496,847 the use of a VM subsystem simply moves the problem to a different layer, and does not address the fundamental issue of application isolation with several natively running applications on one host computer.

[0010] In US 7,028,305 Schaefer teaches a system for creating an application protection layer to separate an application from the host operating system. Shaefer primarily teaches how to intercept the Windows registry to capture configuration information for Windows application and how to create a virtual operating environment for the application. Access to files is provided via a virtual file system, access to registry information via the virtual registry etc. For Unix and MacOS few specific teachings are presented.

[0011] The present invention provides a system, method, and computer readable medium to create an application isolation environment where applications can run unmodified, on un-modified operating systems without requiring any virtual environments, virtual machines or virtual machine monitors. The present invention also teaches how to manage and handle applications that share libraries and resources, and how to handle complex multi-process applications. In one embodiment an implementation in the Linux environment is described, in another embodiment an implementation on Windows is described.

BRIEF SUMMARY OF THE INVENTION

[0012] A method, system, apparatus and/or computer program are described for achieving application isolation for single and multi-process applications and their associated resources. The application isolation is provided without requiring any changes to the host operating system kernel or requiring any changes to the applications. The application isolation is fully transparent to both operating system and application and automatically adjusts for resources such as memory, storage, and CPUs being allocated

and released. The application isolation is provided in an interception layer interposed between the individual applications and the operating system and an interception database. Preferably, any functional changes to system calls are done exclusively within the interception layer and interception database, and only in the context of the calling application.

[0013] Another aspect of the present invention relates to a method and a computer readable medium comprising instructions for application and application group isolation. The instructions are for installing the applications into the isolated environment, running the application in the isolated environment, un-installing applications from the isolated environment, configuring the isolated environments, and deploying the isolated environments.

[0014] Yet another aspect of the invention relates to a system for providing application isolation to one or more applications, the system comprising: one or more isolated environments including application files and executables; one or more interception layers intercepting access to system resources and interfaces; an interception database maintaining mapping between the system resources inside the one or more isolated environments and outside; and a host operating system, wherein the one or more applications are isolated from other applications and the host operating system while running within the one or more isolated environments.

[0015] Definitions:

[0016] The terms “*Windows*” and “*Microsoft Windows*” are utilized herein interchangeably to designate any and all versions of the Microsoft Windows operating systems. By example, and not limitation, this includes Windows XP, Windows Server 2003, Windows NT, Windows Vista, Windows Server 2008, Windows Mobile, and Windows Embedded.

[0017] The terms “*Linux*” and “*UNIX*” are utilized herein to designate any and all variants of Linux and UNIX. By example, and not limitation, this includes RedHat Linux, Suse Linux, Ubuntu Linux, HPUNIX (HP Unix), and Solaris (Sun Unix).

[0018] The term “*node*” and “*host*” are utilized herein to designate one or more processors running a single instance of an operating system. A virtual machine, such as VMWare or XEN VM instance, is also considered a “*node*”. Using VM technology, it is

possible to have multiple nodes on one physical server.

[0019] The terms “*application*” is utilized to designate a grouping of one or more processes, where each process can consist of one or more threads. Operating systems generally launch an application by creating the application’s initial process and letting that initial process run/execute. In the following teachings we often identify the application at launch time with that initial process.

[0020] The term “*application group*” is utilized to designate a grouping of one or more applications.

[0021] In the following we use commonly known terms including but not limited to “*process*”, “*process ID (PID)*”, “*thread*”, “*thread ID (TID)*”, “*thread local storage (TLS)*”, “*instruction pointer*”, “*stack*”, “*kernel*”, “*kernel module*”, “*loadable kernel module*”, “*heap*”, “*stack*”, “*files*”, “*disk*”, “*CPU*”, “*CPU registers*”, “*storage*”, “*memory*”, “*memory segments*”, “*address space*”, “*semaphore*”, “*loader*”, “*system loader*”, “*system path*”, and “*signal*”. These terms are well known in the art and thus will not be described in detail herein.

[0022] The term “*transport*” is utilized to designate the connection, mechanism and/or protocols used for communicating across the distributed application. Examples of transport include TCP/IP, Message Passing Interface (MPI), Myrinet, Fibre Channel, ATM, shared memory, DMA, RDMA, system buses, and custom backplanes. In the following, the term “*transport driver*” is utilized to designate the implementation of the transport. By way of example, the transport driver for TCP/IP would be the local TCP/IP stack running on the host.

[0023] The term “*interception*” is used to designate the mechanism by which an application re-directs a system call or library call to a new implementation. On Linux and other UNIX variants interception is generally achieved by a combination of LD_PRELOAD, wrapper functions, identically named functions resolved earlier in the load process, and changes to the kernel sys_call_table. On Windows, interception can be achieved by modifying a process’ Import Address Table and creating Trampoline functions, as documented by "Detours: Binary Interception of Win32 Functions" by Galen Hunt and Doug Brubacher, Microsoft Research July 1999". Throughout the rest of this document we use the term to designate the functionality across all operating systems.

[0024] The term “*file context*” or “*context*” is used in relation with file operations to designate all relevant file information. By way of example, and not limitation, this includes file name, directory, read/write/append/execute attributes, buffers and other relevant data as required by the operating system.

[0025] The term “*transparent*” is used herein to designate that no modification to the application is required. In other words, the present invention works directly on the application binary without needing any application customization, source code modifications, recompilation, re-linking, special installation, custom agents, or other extensions.

[0026] The terms “*private and isolated environment*” and “*isolated environment*” are used herein interchangeably to designate the private area set aside for application isolation, as described in further detail below.

[0027] The present invention provides application isolation at several levels: 1) during installation, all installation and registration information is intercepted and installation is re-directed to a private and isolated environment, 2) during launch of an application the installation information is retrieved and provided to the application again via interception, and 3) during access to external resources interception of all access is re-directed as necessary. The combination of all levels of isolation provides for fully transparent application isolation. Thus at all times, access to resources, configuration and run-time information is intercepted and redirected.

[0028] By way of example, and not limitation, for embodiments within Windows operating systems, access to the Windows Registry is intercepted and included in the application isolation.

[0029] Further aspects of the invention will be brought out in the following portions of the specification, wherein the detailed description is for the purpose of fully disclosing preferred embodiments of the invention without placing limitations thereon.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

[0030] The invention will be more fully understood by reference to the following drawings which are for illustrative purposes only:

[0031] FIG. 1 is a block diagram of the core system architecture showing two

applications, the interception layer, and the interception database.

[0032] FIG. 2 is a block diagram illustrating installation and running of applications

[0033] FIG. 3 is a block diagram illustrating un-installation

[0034] FIG. 4 is a block diagram illustrating the Interception Database

[0035] FIG. 5 is a block diagram illustrating running application groups

[0036] FIG. 6 is a block diagram illustrating running multiple application groups concurrently

[0037] FIG 7. is a block diagram illustrating installation-free deployment

[0038] FIG 8. is a block diagram illustrating administration

[0039] FIG 9 is a block diagram illustrating various deployment scenarios

[0040] FIG 10 is a block diagram illustrating interception data and control flow

DETAILED DESCRIPTION OF THE INVENTION

[0041] Referring more specifically to the drawings, for illustrative purposes the present invention will be described in relation to FIG. 1 through FIG. 10. It will be appreciated that the system and apparatus of the invention may vary as to configuration and as to details of the constituent components, and that the method may vary as to the specific steps and sequence, without departing from the basic concepts as disclosed herein.

[0042] 1. Introduction.

[0043] The context in which this invention is described is one or more applications being installed, running and accessing local and remote resources. Without affecting the general case of multiple applications, the following scenarios often depict and describe one or two applications as applicable. Multiple applications are handled in a similar manner.

[0044] 1. Overview

[0045] FIG 1 illustrates by way of example embodiment 10 the overall structure of the present invention. The following brief overview illustrates the high-level relationship between the various components; further details on the inner workings and interdependencies are provided in the following sections. Fig 1. Illustrates by way of example embodiment 10 two applications A 22 and B 26 loaded in memory 14 on a node

12. The interception layers 16, 17, are interposed between the applications 22, 26 and the system libraries 18 and operating system 20. The interception database 28 provides system-wide persistent interception information and configuration information for the isolated environments. The interception layers 16,17 combined with the Interception database 28 provides application isolation 24. System resources, such as CPUs 36, I/O devices 34, Network interfaces 32 and storage 30 are accessed using the operating system. Devices accessing remote resources use some form of transport network 38. By way of example, system networking 32 may use TCP/IP over Ethernet transport, Storage 32 may use Fibre Channel or Ethernet transport, and I/O may use USB. The present invention access and arbitrate resources through the operating system and does not work at the transport level.

[0046] 2. Installing and Running applications

[0047] FIG. 2 illustrates by way of example embodiment 40 installation of a typical application “AppXYZ” 42. The Interception Layer (IL) 50 intercepts all calls to system libraries and the operating system. IL 50 communicates with the Interception Database (IDB) 58 to create a private and isolated environment where the application can execute without depending on or affecting other parts of the environment. By way of example, and not limitation, first the installation process requests a resource 44, such as opening a file. The resource request is intercepted by IL 50 and a request to create 54 a private instance of the resource is made to the Interception Database (IDB) 58. The IDB 58 is a system wide database containing mappings 60, 62, 64 between the resources as the application 42 requests them 60, and their private values inside the isolated environment 62, subject to global exceptions 64. Further details on the IDB are given in section 4 below. By way of example, and not limitation, if the resource request 44 was to create a file in C:\Program Files\AppDir, the IDB may map that to a private location 62, such as D:\private\AppXYZ\C\Program Files\AppDir. So while AppXYZ 42 operates under the assumption that it’s working on C:\Program Files\AppDir, in reality all access has been intercepted and re-directed to a private and isolated environment in D:\private\AppXYZ\C\Program Files\AppDir. The IDB 58 returns 54 the private resource to IL 50, which returns the resource handle 46 to the application 42. As the application 42 uses the resource 46 it operates under the assumption that the original resource request was

satisfied, and is unaware that all resources have been relocated to a private and isolated environment. When use of the resource is terminated 48, the IL 50 sends a message to the IDB 58 that the resource currently is inactive 56. All mappings are maintained in the IDB 58 after the installation finishes as they may be needed after the initial request.

[0048] Fig 2 also illustrates, by way of example embodiment 40, how an application 42 runs after being installed. As resources are opened, used, and freed, the same steps as described above are used. As the application 42 executes, it generally access or create resources not used during installation. By way of example, if AppXYZ 42 is a word processor, the user may create a document and save it to storage. That document did not exist as part of the installation process, but is handled using the same mechanisms previously taught. As the user choose to create a new document, AppXYZ 42 makes a request 44 to have the file created. This is intercepted by the IL 50 and forwarded 52 to the IDB 58. The IDB creates a mapping between the Applications 42s public document name 60, and the private and isolated document name 62. As with Application 42 information stored in the IDB 58, so is the application data information stored persistently until un-installation.

[0049] At times it may be desirable to store some user-data outside the isolated environment, such as on a central file server. In a preferred embodiment, this is supported by specifying which resource locations should remain fixed and public in the global exceptions 64. Such public resources are not translated into the isolated environment.

[0050] 3. Uninstalling Applications

[0051] FIG. 3 illustrates by way of example embodiment 80, un-installation of a typical application AppXYZ 82. The un-installation uses and requests resources 84, which are intercepted by the IL 86 and redirected 88 by the IDB 90, as described above. All actions, such as deletion of files, are re-directed to the private and isolated location. When the un-install terminates, sometimes called exit(), the exit is intercepted 92 by the IL 86, and forwarded 94 to the IDB 90. The IDB 90 removes all entries mapping 100 application AppXYZ 82 resources 96 against its isolated environment 98. The application is now uninstalled, and all isolation information has been removed.

[0052] 4. Interception Database and Resource Mapping

[0053] The Interception Database (IDB) is a system wide database containing mappings

between the resources as the application requests them, and their private values inside the isolated environment. Fig. 4 illustrates, by way of example embodiment 120, the Interception Database (IDB) 122, and its various components. The IDB 122 contains two main components, a rules engine 130 and the core resource mappings 132. The rules engine 130 contains the main high-level configuration information 124 as provided by an administrator 126. The rules engine 130 and its configuration information 124 includes, but is not limited to, information designating the base directory for installing the isolated environment, specific exceptions 138 to the resource mappings and the general mechanism used to create the mappings. The administrator 126 defines exceptions 138 as needed. The global exceptions contain all resources that should not be remapped to the isolated environments. Examples include, but are not limited to, shared storage, shared devices, network resources, and system-wide resources.

[0054] The resource mapping 132 maintains mapping between public resources 134 and the corresponding private and isolated resources 136. The resource mapping 132 also consults the global exceptions 138 prior to translating any public to private or private to public resource requests.

[0055] Resources take many forms including but not limited to files, fonts, shared libraries, shared devices, and storage. On Microsoft Windows the Registry is an important component and contains system wide configuration information used by most applications. Some resources, such as data files, tend to be local to the individual applications, while e.g. fonts tend to be shared between multiple applications.

[0056] Access to files are handled by the IL (Fig. 2 - 50) intercepting all file operations between the application and the system libraries and operating systems. Examples include, but are not limited to open(), fopen(), write(), read(), close(), seek(), remove() and the Windows equivalents. Generally these functions either contain a public file name as part of the arguments, or a file handle to an already established file. The files names are remapped as described above, to an isolated environment, and any further reference to the handle is automatically re-directed to the isolated environment. File operations that return information, are translate back to the public values. By way of example, and not limitation, if the applications ask for “current directory”, the public name, as the application expects is returned, and not the private name within the isolated environment.

By way of further example, if the current directory is located on shared storage included the global exceptions 138, the directory is returned un-translated, as it's subject to the exception handling.

[0057] File, paths and other resource names can be specified both as absolute values or relative values. By way of example, and not limitation, an absolute path for a document file may be "C:\MyDocuments\myfile.doc", while a relative reference may be "..\docs\myfile.doc". Absolute references are resolved as previously described by consulting the public resources 134, private resources 136 and global exceptions 138. Relative addresses are resolved in a multi-step process: First relative names are converted to absolute names and then the absolute name is converted as previously described. This mechanism ensures fully transparent support of both absolute and relative naming of all resources.

[0058] Fonts pose particular problems, as fonts reside both in application-specific directories and global system directories, such as "C:\Windows\Fonts" on Windows and "/usr/X11R6/lib/X11/fonts/" and "/usr/share/fonts/" on Linux. An application may install font both into one or more global font directories as well as application-specific directories. All shared-fonts directories are included in the Global Exceptions 138 as they should be accessed directly. If during installation additional fonts are installed, they are installed according to the policy chosen by the administrator 126. Prior to installation, the administrator chooses if application-installed fonts are allowed to be placed in the global fonts directory or if they should be placed in the isolated environment. The rules engine 130 consults this administrative choice and upon receiving a request to enumerate the font directory will include isolated-environment fonts if so configured. If the application installs its fonts into its own file structure, the fonts are treated as normal files and are not subject to the automatic enumeration as the application knows where to look for its application-specific fonts.

[0059] Modern operating systems share components across multiple applications. Such shared libraries also pose a special case. On Windows Dynamic Link Libraries (DLLs) and on Linux/UNIX shared objects (.so files) are examples of such shared components. On Windows shared libraries primarily reside in C:\Windows and C:\Windows\System32, but can sit anywhere. On Linux/Unix the primary locations are '/usr/lib', '/usr/X11/lib' and the entire /usr/lib/ directory structure. The loader of the operating system traverses

the system PATH to find any requested shared library, but this can be manually or programmatically changed as part of the load process. The PATH is set using environment variables both on Windows and Linux. In order to intercept loading of shares libraries the present invention loads the application in stead of using the system loader directly. This enables interception of library loading done by the loader. If during installation additional shared libraries are installed, they are installed according to the policy chosen by the administrator 126. Prior to installation, the administrator chooses if application–installed libraries are allowed to be placed in a global directory or if they should be placed in the private and isolated environment. If the libraries are placed into the private and isolated environment, the load PATH is adjusted to search the private location.

[0060] As with files, libraries can be loaded with both absolute and relative addresses. The load process handles the resource mapping as described above. In all cases, the loading must follow the same path and address resolution as the system loader provides.

[0061] If the application installs its shared libraries into its own file structure, the libraries are treated as normal files and are not subject to an adjusted PATH or load-order as the application knows where to look for its application-specific libraries. In the preferred embodiment, if the application installs new shared libraries, they are installed into the isolated environment

[0062] One of the most significant sources of application incompatibilities, and one of the motivators for the present invention, is shared library conflict. By way of example, and not limitation, if a shared library is loaded on the system, and a new application installs an older version of the library, the older version may overwrite the newer version and render other applications non-functional based on having their shared library replaced by an incompatible older version. This is a common problem on both the Windows and Linux platforms. Using the preferred embodiment described above, the application would install the older library into its isolated environment and therefore not affect other applications. The application would load and use the older library without ever being aware that it was provided from the isolated environment, and other applications running on the system would be unaffected by the installation of the older library.

[0063] Microsoft Windows uses a special configuration system generally referred to as “the Registry”. The registry contains configuration, installation and un-installation information for applications on the system. When an application installs on a Windows system, it uses the registry to store values such as “home directory”, “recent files”, etc. The preferred embodiment on Windows systems additionally include interception of all registry information, and ensures that installation and runtime information that would normally go into the registry, in stead is stored and maintained in the IDB. During installation of a Windows application all registry information is thus stored in the IDB and not the registry. When an application requests registry information, the information is provided from the IDB, and not the registry. This ensures complete application isolation from the registry.

[0064] The isolated environment contains all application files and shared resources and their respective mappings. These are all preserved persistently on local or remote storage and can be archived, copied and restored as any other set of files. Specifically, the isolated environment directory structure can be copied to a different node, and used directly to start the application on that node.

[0065] So far the Interception database has been described as a “database”. Based on the teachings above, it’s readily apparent to anyone skilled in the art, that the only requirement is that updates to the resource tables 134, 136 and 138 be atomic at the record level. This functionality can be readily implemented in a variety of ways, including using Java’s ConcurrentHashMap(), the Windows .NET equivalents, or by custom programming the data structures and locking. Furthermore, preferably concurrent access to the Interception Database translations is provided. In an alternate implementation such a custom interception database is used in stead of a full database.

[0066] 5. Interception data and control flow

[0067] Fig 10 illustrates by way of example embodiment 240 the data and control flow in more detail. By way of example, and not limitation, consider first an environment with the present invention inactive. An application 242 calls a write() 243 operation. The write operation is resolved by the operating system loader and directed 244 to the system libraries 248 and operating system 250, and ultimately writes data to storage 251. Return value is returned 246 to the caller 243 within the calling application 242.

[0068] By way of example, and not limitation, consider an environment with the present invention active. An application 252 calls a write() 253 operation. As described in above, the write() is intercepted 254 by the interception layer 262. Parameters to the write() call are translated by the Interception Database 264 and the rules for the isolated environment 266 and the file context and parameters of the calling write are adjusted to point to the isolated environment. The write call 268 is then forwarded to the system libraries 258 and operating system 260 as were the case with the present invention inactive. The return value 266 from the write is returned to the IL 262 which, using the IDB 264, maps the result back into the original context and returns the value 256 to the caller 253. The application 252 issuing the write 253 operating is thus unaware that the write is being intercepted and re-directed to the isolated environment. All translation and isolation is performed outside the application 252, and before the write operation ever reaches the system libraries 258 or operating system 260.

[0069] A specific example, using ANSI C, further illustrates the mechanics of the IL 262 and IDB 264 translations. Consider an example where a file is opened for writing, a small text is written, and the file is closed using the following code

```
int main(void)
{
    char const *pStr = "small text";
    FILE *fp = fopen("/home/user/newfile.txt", "w")
    if (fp != null)
        fwrite(pStr,strlen(pStr),1,fp);
    fclose(fp)
}
```

[0070] The call to fopen() returns a file pointer, which the fwrite() operation uses to write data to the file. The call to fopen() includes the file name "/home/user/newfile.txt" as the first parameter. The Interception Layer 262 intercepts the call to fopen() and changes the actual filename to the corresponding location in the isolated environment before passing 268 the call on to the system library implementation 258. The following fwrite() operation is unaware that the file pointer points to the isolated environment and simply

writes the data. Finally, fclose() is called to close the file. The file pointer still points to the isolated environment and the close proceeds as a close would without the present invention active.

[0071] 6. Application Groups

[0072] At times multiple applications share data, libraries and work in combination. By way of example, and not limitation, Microsoft Word may include a Microsoft Excel spreadsheet. In general any number of applications may need to collaborate and share data. So far the approach has been to isolate applications so that, to continue the example, if Word and Excel were installed separately, they would both be isolated and not able to work together. To enable sharing between pre-designated applications, the applications need to be grouped together in an application group and installed inside the same isolated environment. FIG. 5 illustrates by way of example embodiment 140, an application group 142 operating within the present invention. The administrator 152 pre-defines the application group 142 and the individual applications within the group: App-1 143, App-2 144 and App-n 146. The administrator 152 commits the application group to the IDB 150. The IDB uses the same mechanisms as described above for individual applications, and structures the isolated environment 154 so that the individual applications share resources and file system. By installing the applications together they automatically use the same isolated environment and sharing is fully automatic without requiring any additional information. The interception layer 148 intercepts, as previously described, and requires no special configuration; all application group information is contained within the IDB 150 and the settings for the isolated environment 154.

[0073] 7. Concurrent operation of multiple application groups

[0074] FIG. 6 illustrates by way of example embodiment 160, concurrent operation of three application groups: application group A 162, application group B 166 and application group C 170. Each application group consists of one or more applications. As previously described each application group has a dedicated interception layer: IL 164 for application group A 162, IL 168 for application group B 166, and IL 172 for application group C 170. Each interception layer 164, 168, 172 provide the interception services as previously described, with each attached to only one application group. As previously disclosed, the Interception Database 174 is global, and is shared between all application

groups and interception layers.

[0075] The administrator 176 commits all administrative settings to the IDB 174, which is reflected in the database tables for the isolated environment 178.

[0076] 8. Running multiple concurrent instances of one application

[0077] At times it may be desirable to run multiple instances of the same application or application group, but in separate isolated environments. Referring again to Fig. 6 for illustrative purposes. The administrator 176 defines each instance of the application group using separate application group names. Even though Application Group A 162, Application Group B 166, and Application Group C 170 are identical, they have been pre-defined with their own environment, and thus run in separate isolated environments without any further intervention or configuration.

[0078] 9. Installation-free deployment

[0079] One of the major problems with application deployment is the actual installation and the associated risks as described previously. Using the present invention, a pre-created isolated environment can be used in place of performing an actual installation. The isolated environment contains all application files, shared libraries, and installation data and can be moved, copied and run from anywhere the present invention is present.

[0080] Fig. 7 illustrates by way of example embodiment 180, how to deploy an isolated environment without needing more than one initial installation 181. First the administrator 196 installs 184 the application group 182. As previously taught the interception database 186 creates an isolated environment 188 which contains all application group data, including shared files, data and programs. As taught above, the isolated environment is written to storage and can be copied and run elsewhere. With the isolated environment ensuring isolation from the underlying operating system and applications, an isolated environment can be deployed on a different node by copying the entire isolated environment directory structure to the new node and starting the application. Referring to Fig 7, the administrator 196 copies the isolated environment 188 into the first node 190, the second node 192 and the third node 194.

[0081] In an alternate embodiment, the environment 188 is stored on shared storage, and is accessed directly from the shared storage. In this embodiment, the isolated environment is loaded directly from shared storage, and only local data, such as

temporary files, are kept locally.

[0082] In another embodiment, the environment 188 is saved to storage and shipped to a remote site. The remote site loads the environment and runs the applications directly from within the environment without any installations. In this embodiment the present invention may be used for disaster recovery.

[0083] 10. Administration

[0084] Fig. 8 illustrates by way of example embodiment 200, the management infrastructure. The administrator 202 communicates configuration preferences to the Interception database 204 for each isolated environment 206. The IDB 204 contains, as described above, two separate modules: 1) a rules engine (Fig 4 – 130) and 2) management of the resource mappings (Fig. 4 – 132). The rules engine implements the administrator provided resource translations and populates the tables (Fig 4 – 134,136,138).

[0085] The administrator 202 provides general configuration information applicable to all isolated environments and applications 203, unless explicitly changed for a particular isolated environment 205. Examples of administrator-provided global configuration information 203 includes, but is not limited to

[0086] * Default storage location for all isolated environments

[0087] * Default resource exceptions

[0088] * Default application and application group naming

[0089] * Default policy for installing fonts and shared resources into global or isolated environment

[0090] Each setting can be changed, i.e. replaced, on an application by application basis, and on an application-group by application basis. As determined by the administrator, examples of administrator-provided application-level configuration information 205 include, but is not limited to

[0091] * Storage location for isolated environment

[0092] * Logical name of application or application group

[0093] * Application or application-group specific resource exceptions

[0094] * Policy for installing fonts and shared resources into global or isolated environment

[0095] The combination of the global configuration information 203 with the rules engine (Fig 4 – 130), makes the configuration and deployment on new isolated environment fully automatic after the initial global configuration has been provided. As described, it may be desirable to change one or more of an application's isolated environment settings. By way of example, and not limitation, if a particular application needs to locally access certain resources only available on a particular server, that one application's isolated environment would be located on that particular server, while all other environments were centrally stored. The ability to “mix and match” environments and deployments ensure full flexibility and ability to deploy multiple applications in a heterogeneous environment with all the benefits of the present invention.

[0096] In another embodiment the administrative functions 202 is done programmatically using an Application Programming Interface (API).

[0097] 11. Deployment Scenarios

[0098] FIG 9 illustrates by way of example embodiment 220 a variety of ways the invention can be configured to operate. In one embodiment, the invention is configured to run from a central file server 222, in another it is configured to run on a pair of application servers 224, 226. In a third embodiment the invention is configured to run on a LAN 228 connected PC 232 together with the application servers 224, 226, and with environments loaded from the central file server 222. In a fourth embodiment the invention is configured to isolate applications on a cell phone 230, which is wirelessly connected 238 to the Internet 236, the application servers 224,226 and the file server 222. A fifth embodiment has an isolated environment on a home-PC 234 connected via the internet 236 to the application servers 224,226 and the LAN PC 232. The invention runs on one or more of the devices, can be distributed across two or more of these elements, and allows for running the invention on any number of the devices (222,224,226,230,232,234) at the same time

[0099] 12. Conclusion.

[00100] In the embodiments described herein, an example programming environment was described for which an embodiment of programming according to the invention was taught. It should be appreciated that the present invention can be implemented by one of ordinary skill in the art using different program organizations and structures, different

data structures, and of course any desired naming conventions without departing from the teachings herein. In addition, the invention can be ported, or otherwise configured for, use across a wide-range of operating system environments.

[00101] Although the description above contains many details, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the exemplary embodiments of this invention. Therefore, it will be appreciated that the scope of the present invention fully encompasses other embodiments which may become obvious to those skilled in the art, and that the scope of the present invention is accordingly to be limited by nothing other than the appended claims, in which reference to an element in the singular is not intended to mean “one and only one” unless explicitly so stated, but rather “one or more.” All structural and functional equivalents to the elements of the above-described preferred embodiment that are known to those of ordinary skill in the art are expressly incorporated herein by reference and are intended to be encompassed by the present claims. Moreover, it is not necessary for a device or method to address each and every problem sought to be solved by the present invention, for it to be encompassed by the present claims. Furthermore, no element, component, or method step in the present disclosure is intended to be dedicated to the public regardless of whether the element, component, or method step is explicitly recited in the claims. No claim element herein is to be construed under the provisions of 35 U.S.C. 112, sixth paragraph, unless the element is expressly recited using the phrase “means for.”

CLAIMS

What is claimed is:

1. A system, comprising:
one or more isolated environments including one or more applications and executables;
wherein the one or more isolated environments are created during installation of the one or more applications;
wherein updates to the one or more isolated environments occur as the one or more applications use additional resources; and
wherein the one or more isolated environments are copied to storage and then removed as part of an uninstall of the one or more applications.
2. The system according to claim 1, wherein the one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments.
3. The system according to claim 1 comprising one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces.
4. The system according to claim 3, wherein the one or more interception layers intercept calls to the host operating system and system libraries created by the one or more applications.
5. The system according to claim 1 comprising an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside.
6. The system according to claim 5, wherein the interception database translates parameters and contexts between a host environment and the one or more isolated environments.

7. The system according to claim 1, wherein the one or more isolated environments are stored on a local storage.
8. The system according to claim 1, wherein the one or more isolated environments are stored on a networked storage and the one or more applications are delivered over a network.
9. The system according to claim 1, wherein each of the one or more applications is installed into its own isolated environment.
10. The system according to claim 1, wherein two or more applications are installed into a shared isolated environment.
11. The system according to claim 10, wherein the two or more applications share resources inside the shared isolated environment.
12. The system according to claim 1, wherein two or more applications are installed into separate isolated environments and the one or more applications run concurrently in the separate isolated environments.
13. The system according to claim 1, wherein a first application of the one or more applications is installed twice into separate isolated environments, and the separate isolated environments run concurrently and independently.
14. A method, comprising:
 - creating one or more isolated environments during installation of one or more applications;
 - updating the one or more isolated environments as the one or more applications use additional resources; and
 - removing the one or more isolated environments as part of uninstalling the one or more applications.

15. The method of claim 14 comprising intercepting access to system resources and interfaces at one or more interception layers.

16. The method of claim 15 comprising maintaining mapping between the system resources inside the one or more isolated environments and outside.

17. The method of claim 14 comprising isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

18. A non-transitory computer readable storage medium comprising instructions for:
creating one or more isolated environments during installation of one or more applications;

updating the one or more isolated environments as the one or more applications use additional resources; and

removing the one or more isolated environments as part of uninstalling the one or more applications.

19. The non-transitory computer readable storage medium of claim 18 comprising instructions for maintaining mapping between the system resources inside the one or more isolated environments and outside.

20. The non-transitory computer readable storage medium of claim 19 comprising instructions for isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

ABSTRACT

A system, method, and computer readable medium for providing application isolation to one or more applications and their associated resources. The system may include one or more isolated environments including application files and executables, and one or more interception layers intercepting access to system resources and interfaces. Further, the system may include an interception database maintaining mapping between the system resources inside the one or more isolated environments and outside, and a host operating system. The one or more applications may be isolated from other applications and the host operating system while running within the one or more isolated environments.

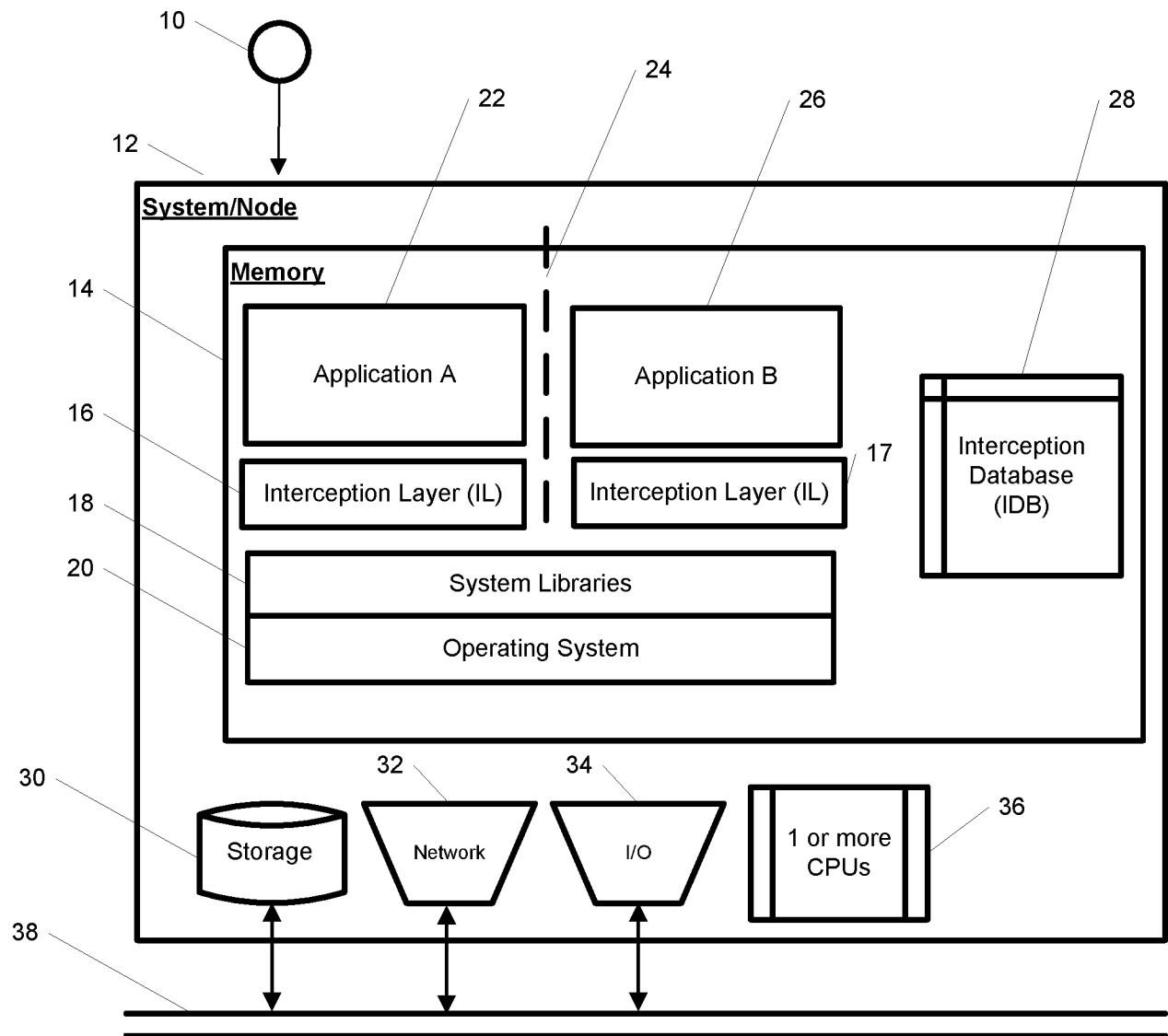


FIG.1 – System Overview

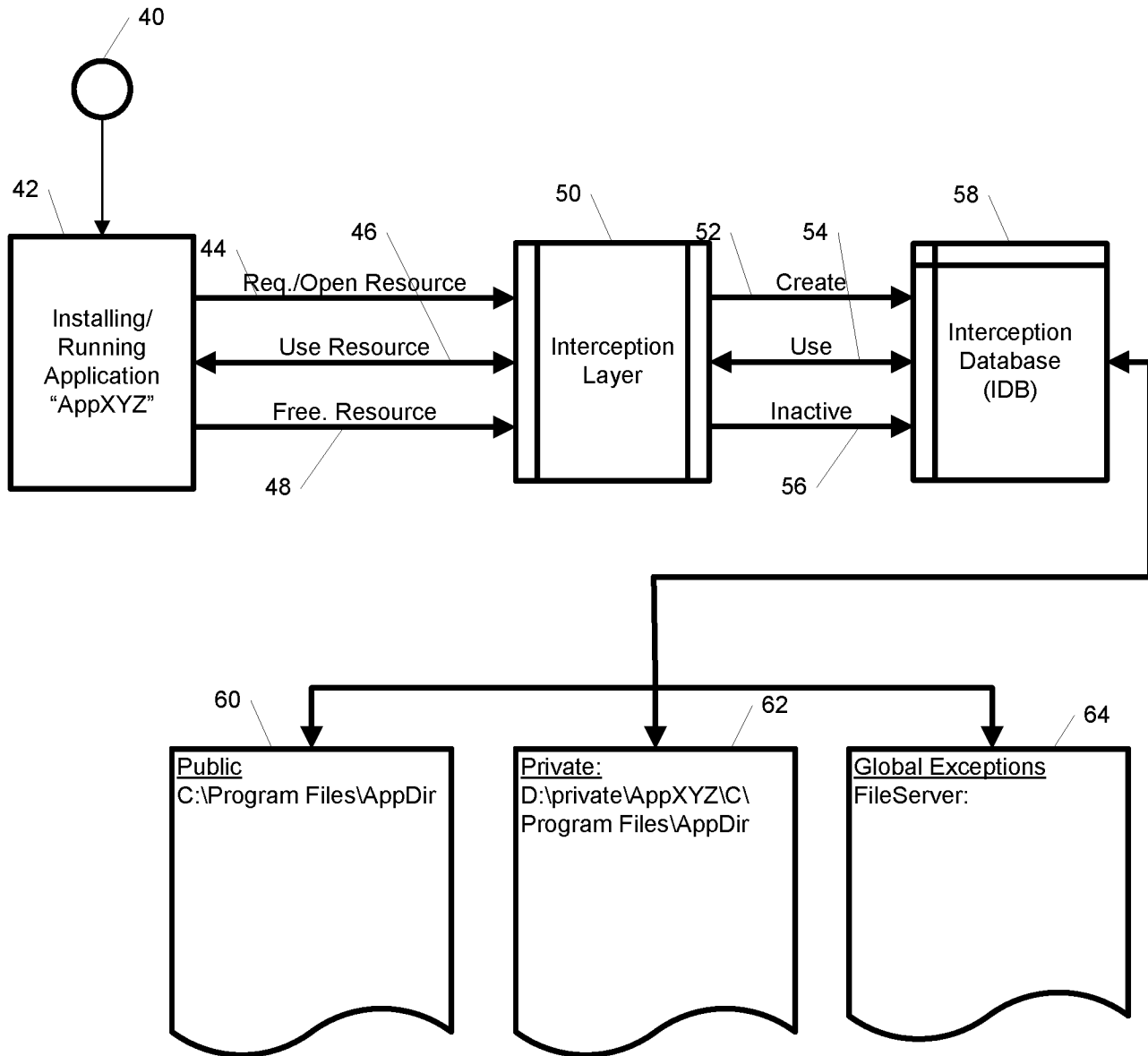


FIG.2 – Installing and running an Application

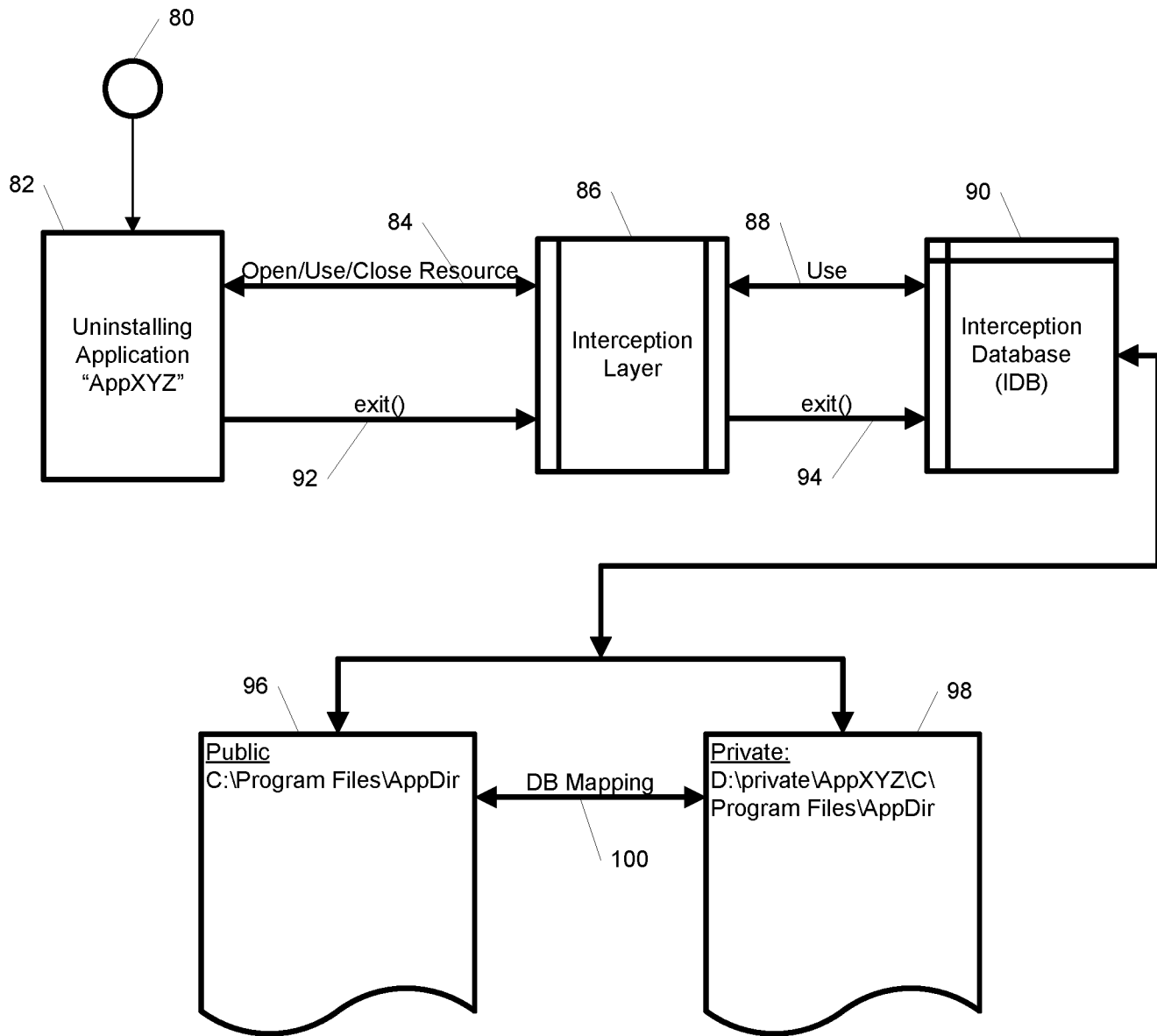


FIG.3 – Un-Installing an Application

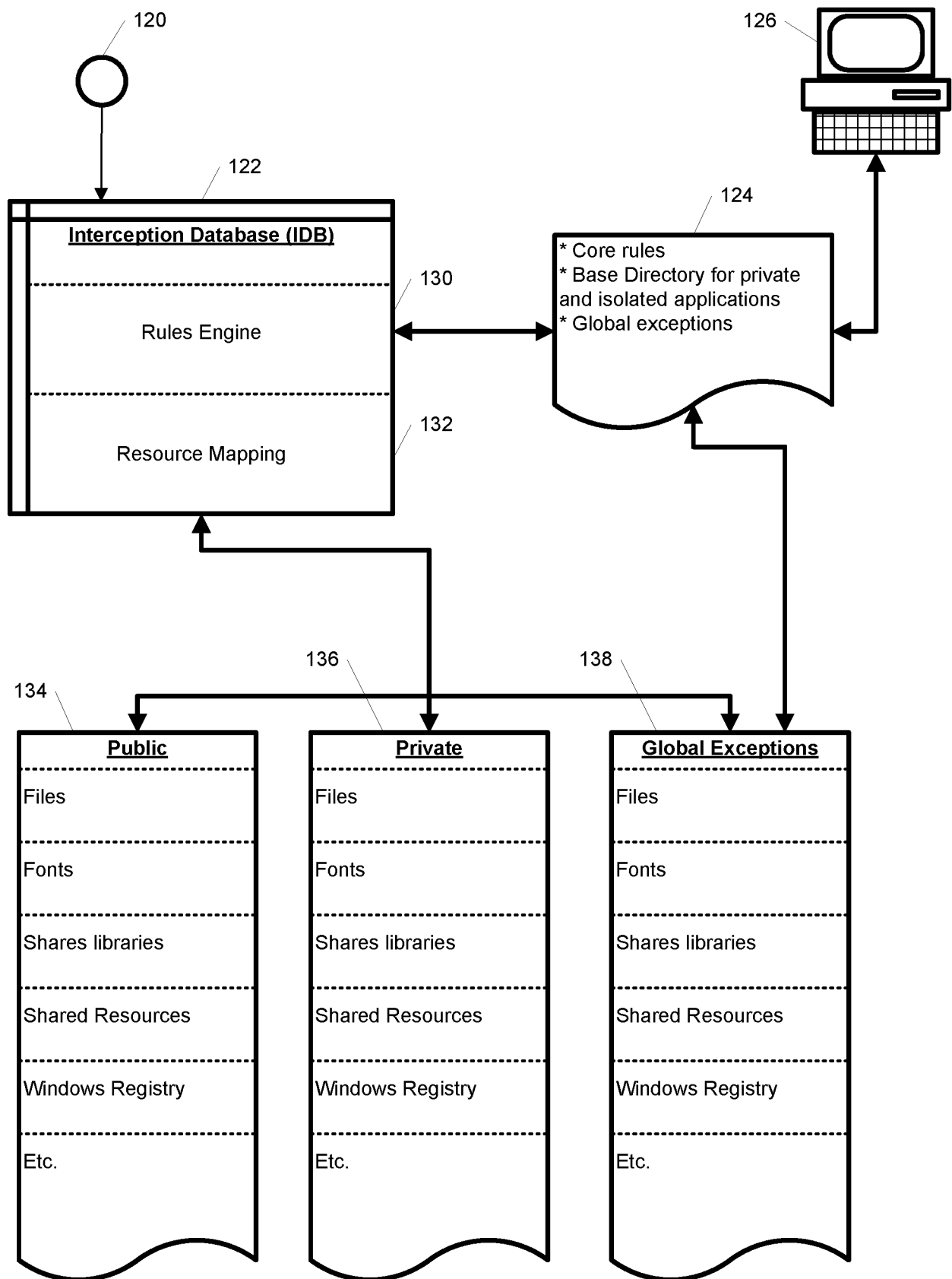


FIG.4 – Interception Database (IDB)

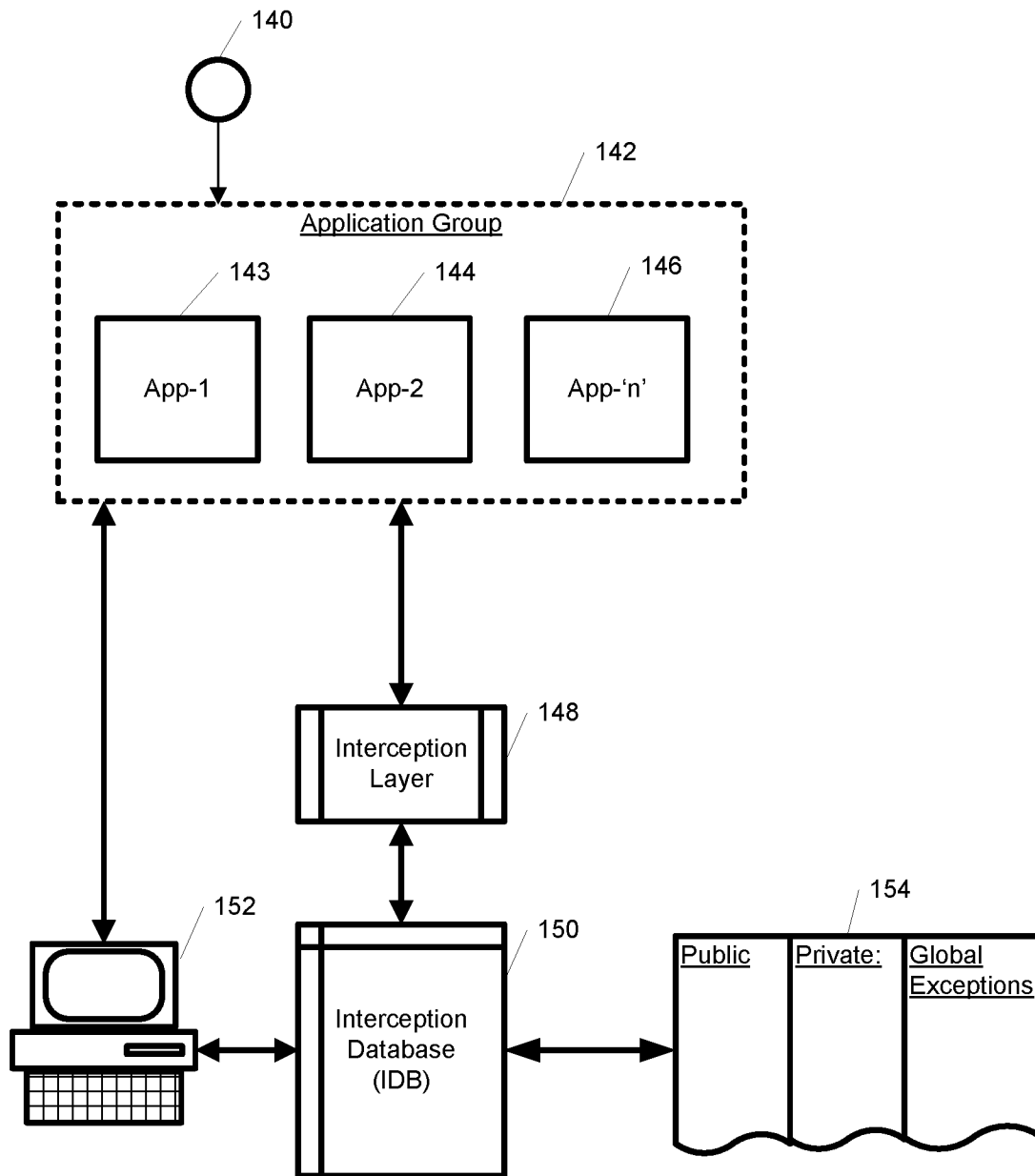


FIG.5 – Application Groups

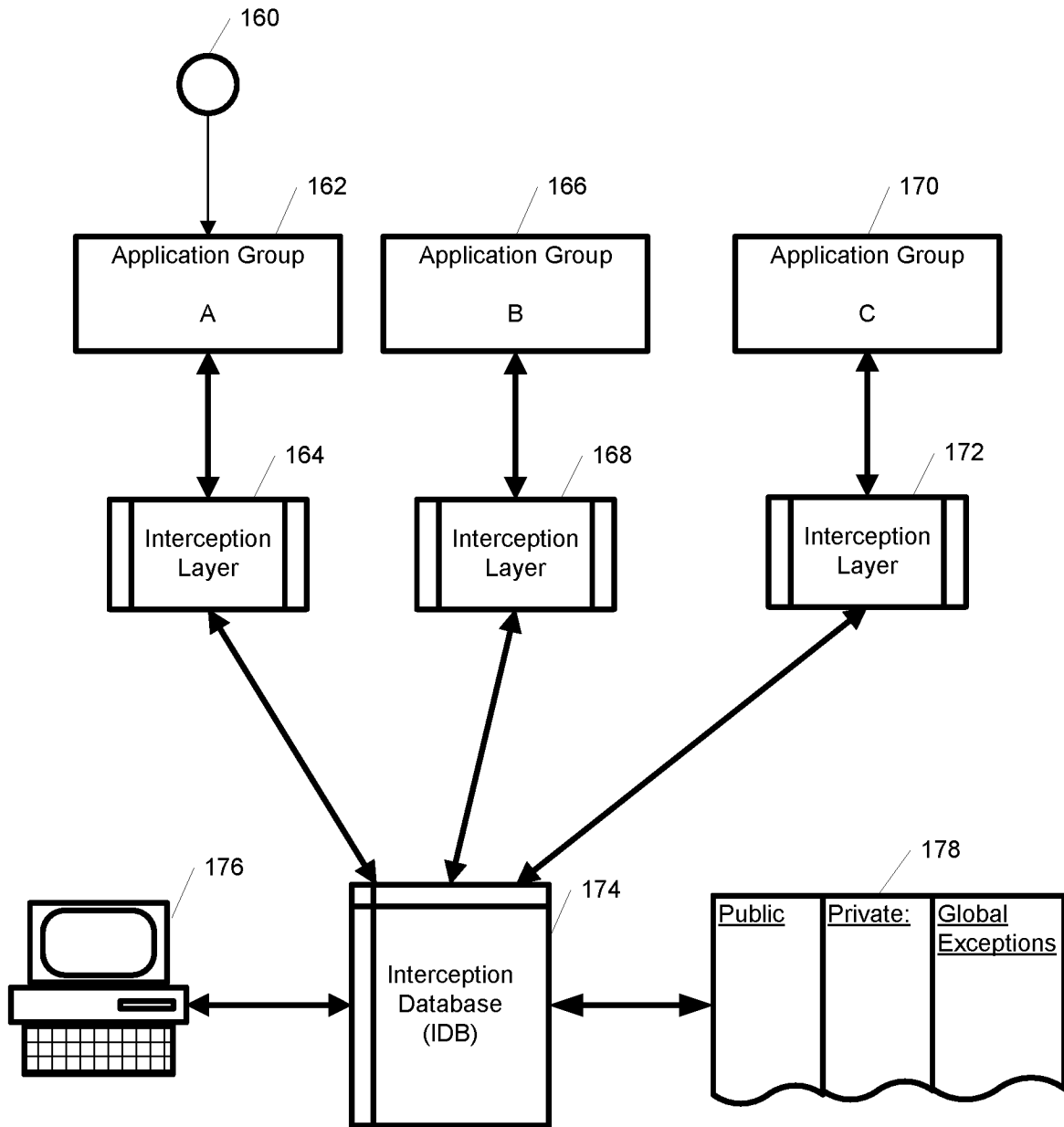


FIG.6 – Multiple Application Groups

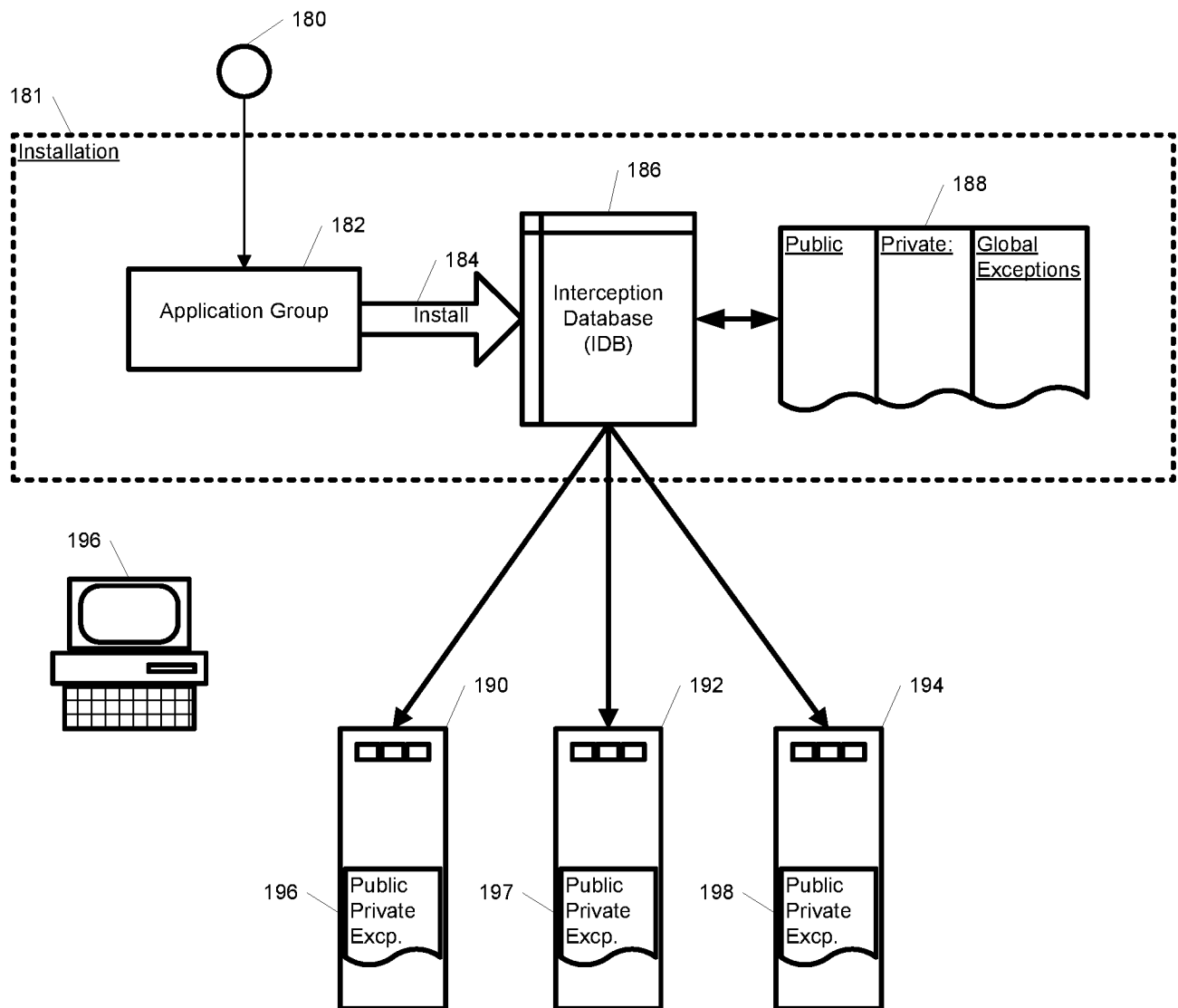


FIG.7 – Installation free deployment

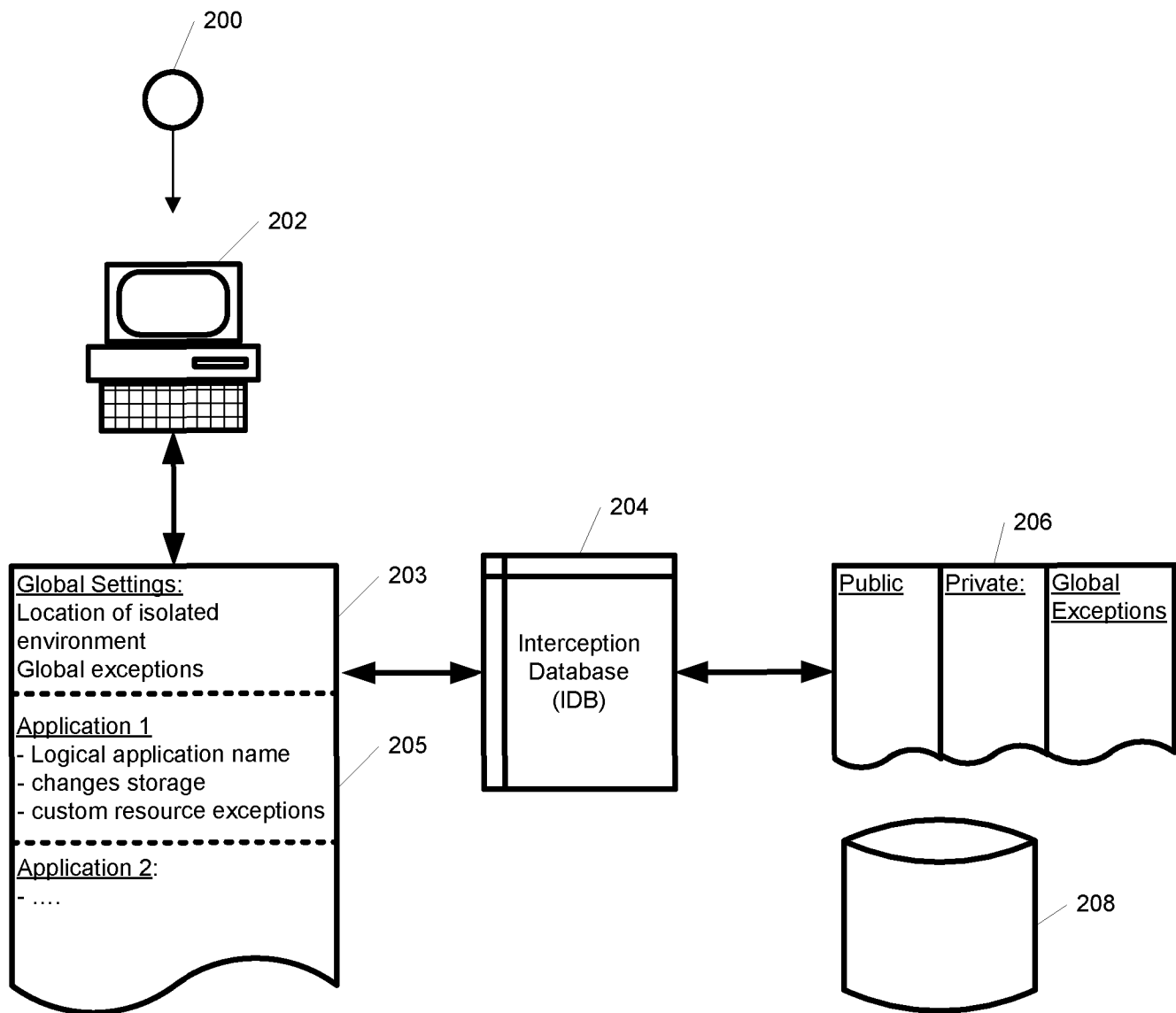


FIG.8 – Administration

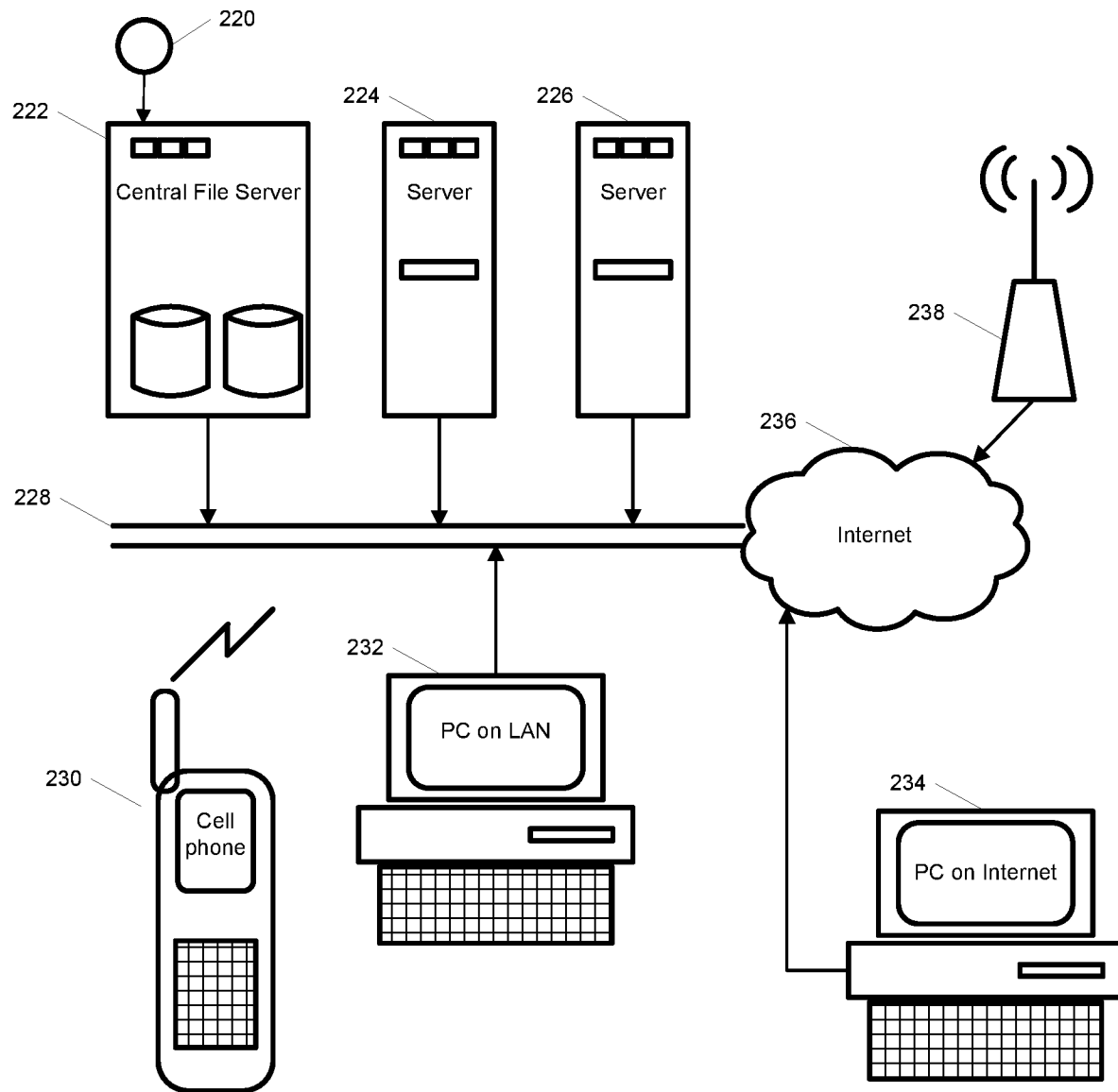


Fig.9 – Deployment scenarios

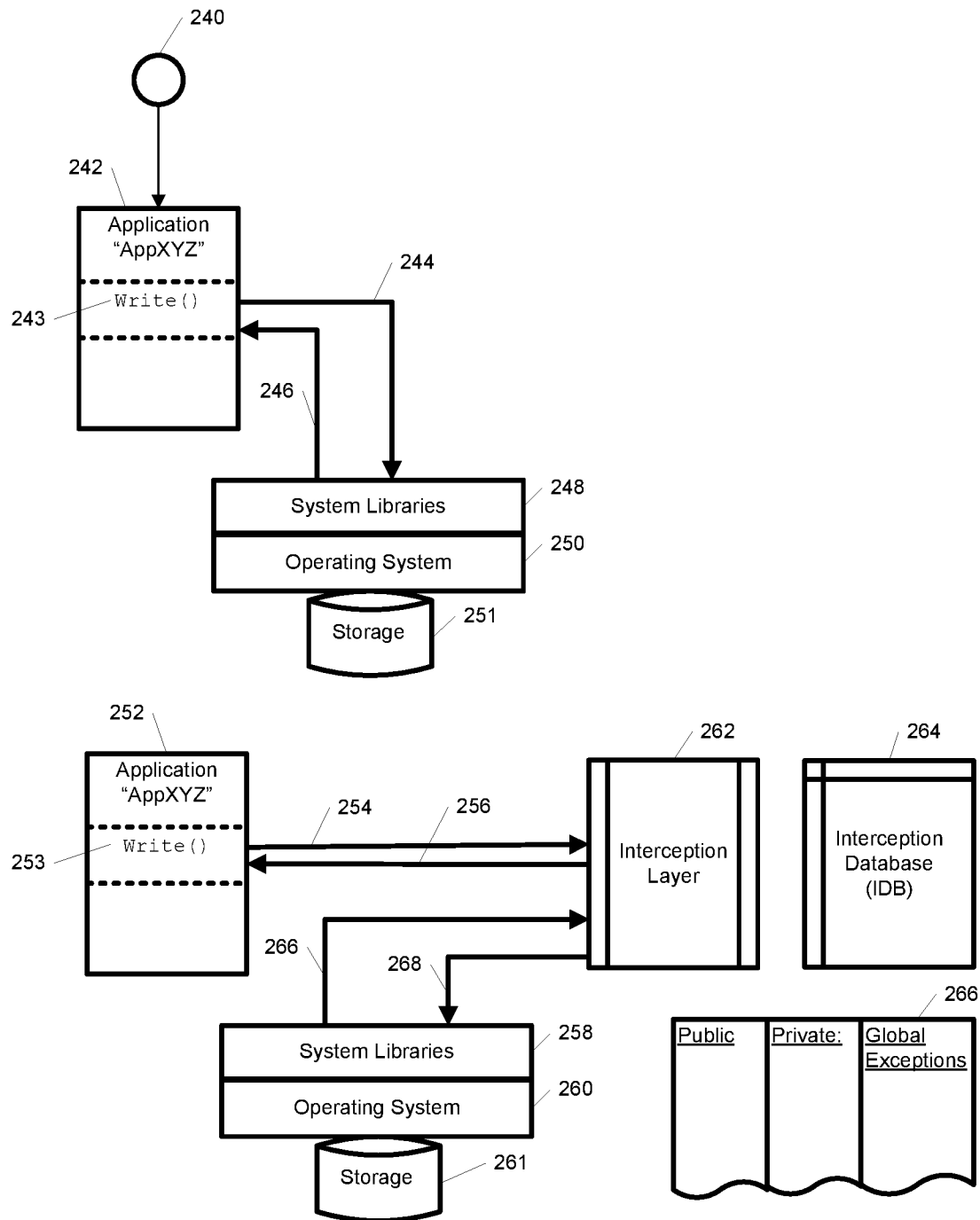


FIG.10 – Detailed control and dataflow

PTO/AIA/01 (06-12)

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)**Title of
Invention****System and Method for Application Isolation**

As the below named inventor, I hereby declare that:

This declaration
is directed to:☐

The attached application, or

☒United States application or PCT international application number 13/708,477filed on December 7, 2012

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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LEGAL NAME OF INVENTORInventor: Allan HavemoseDate (Optional): 12/7/2012Signature: Allan Havemose

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**NONPUBLICATION REQUEST
UNDER
35 U.S.C. 122(b)(2)(B)(i)**

First Named Inventor

HAVEMOSE, Allan

Title

SYSTEM AND METHOD FOR APPLICATION IS

Attorney Docket Number

Avail0109-C3

I hereby certify that the invention disclosed in the attached application **has not and will not be** the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

I hereby request that the attached application not be published under 35 U.S.C. 122(b).

/Raffi Gostanian/

May 9, 2016

Signature

Date

Raffi Gostanain

42595

Typed or printed name

Registration Number, if applicable

972-849-1310

Telephone Number

This request must be signed in compliance with 37 CFR 1.33(b) and submitted with the application **upon filing**.

Applicant may rescind this nonpublication request at any time. If applicant rescinds a request that an application not be published under 35 U.S.C. 122(b), the application will be scheduled for publication at eighteen months from the earliest claimed filing date for which a benefit is claimed.

If applicant subsequently files an application directed to the invention disclosed in the attached application in another country, or under a multilateral international agreement, that requires publication of applications eighteen months after filing, the applicant **must** notify the United States Patent and Trademark Office of such filing within forty-five (45) days after the date of the filing of such foreign or international application. **Failure to do so will result in abandonment of this application (35 U.S.C. 122(b)(2)(B)(iii)).**

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84646

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RESEARCH TRIANGLE PARK CENTER, 4819 EMPEROR BOULEVARD, SUITE 400
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SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	/Keith Bergelt/	Date	May 9, 2016
Name	Keith Bergelt	Telephone	
Title	President and CEO		

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: OPEN INVENTION NETWORK LLCApplication No./Patent No.: 12/421,691 Filed/Issue Date: 04/10/2009Titled: SYSTEM AND METHOD FOR APPLICATION ISOLATIONOpen Invention Network LLC, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 022531, Frame 0595, or for which a copy thereof is attached.
- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet(s).☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Keith Bergelt/

Signature

Keith Bergelt

Printed or Typed Name

May 9, 2016

Date

President and CEO

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION			
First Named Inventor/Applicant Name:	Allan Havemose			
Filer:	Raffi Gostanian			
Attorney Docket Number:	AVAIL0109-C3			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	280	280
Utility Search Fee	1111	1	600	600
Utility Examination Fee	1311	1	720	720
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1600

Electronic Acknowledgement Receipt

EFS ID:	25719292
Application Number:	15149518
International Application Number:	
Confirmation Number:	3459
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Raffi Gostanian
Filer Authorized By:	
Attorney Docket Number:	AVAIL0109-C3
Receipt Date:	09-MAY-2016
Filing Date:	
Time Stamp:	14:29:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1600
RAM confirmation Number	772
Deposit Account	505904
Authorized User	ZARINELLI, MICHELE

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	WebADS.pdf	125338	no	8
			4e5281540e7022e20b48e0f0de144a184e62c76f		
Warnings:					
Information:					
2	Transmittal of New Application	Patent_Application_Transmittal.pdf	276344	no	2
			6d6db0e46f8a3ba641855d21e939b17257d00820		
Warnings:					
Information:					
3		Application.pdf	158061	yes	23
			98dc05094b0a3810ccaed9aa52857e7c2876a778		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	19	
	Claims		20	22	
	Abstract		23	23	
Warnings:					
Information:					
4	Drawings-only black and white line drawings	Drawings.pdf	98095	no	10
			ee84766422242adf5edb67c65ee92e9bcc4027b		
Warnings:					
Information:					
5	Oath or Declaration filed	Declaration_Signed.pdf	283972	no	1
			7ebb8030466364fafc61c792e8c2cbe9536dfcfa		
Warnings:					
Information:					
6	Nonpublication request from applicant	NonPub_Request.pdf	220629	no	1
			d1f81f142895b8a19e67bc50ff00707e531b5a9		

Warnings:					
Information:					
7	Power of Attorney	POA.pdf	80411 03ad76813e0317ae2b506f3ad67e949b5cb eb528	no	2
Warnings:					
Information:					
8	Assignee showing of ownership per 37 CFR 3.73	Statement.pdf	118014 7105c1ae7bf9123c75434762db9121fbfc23 832e	no	3
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	35000 7ae44f904adac7dad9bdfb8371952bc5d0c 002e5	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1395864		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2:

<input type="checkbox"/> Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--

Inventor Information:

Inventor 1				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Allan		Havemose	
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	Arroyo Grande	State/Province	CA	Country of Residence ⁱ US
Mailing Address of Inventor:				
Address 1	2364 Par View Lane			
Address 2				
City	Arroyo Grande	State/Province	CA	
Postal Code	93420	Country ⁱ	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
<input type="checkbox"/> An Address is being provided for the correspondence information of this application.	
Customer Number	84646
Email Address	<input type="button" value="Add Email"/> <input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		
Attorney Docket Number	AVAIL0109-C3	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	10	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☒ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)			
Customer Number	84646					
Prefix	Given Name	Middle Name	Family Name	Suffix	<input type="button" value="Remove"/>	
Registration Number						
Prefix	Given Name	Middle Name	Family Name	Suffix	<input type="button" value="Remove"/>	
Registration Number						
Additional Representative Information blocks may be generated within this form by selecting the Add button.						

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the application number blank.

Prior Application Status		Patented	Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	Continuation of	14606175	2015-01-27	9336045	2016-05-10

Prior Application Status		Patented	Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14606175	Continuation of	13708477	2012-12-07	8943500	2015-01-27

Prior Application Status		Patented	Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13708477	Continuation of	12421691	2009-04-10	8341631	2012-12-25

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.



NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

- ☒ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.
- ☒ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

- ☒ Assignee
 ☐ Legal Representative under 35 U.S.C. 117
 ☐ Joint Inventor
- ☐ Person to whom the inventor is obligated to assign.
 ☐ Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name OPEN INVENTION NETWORK LLC

Mailing Address Information For Applicant:

Address 1	Research Triangle Park Center		
Address 2	4819 Emperor Boulevard, Suite 400		
City	Durham	State/Province	NC
Country ⁱ	US	Postal Code	27703
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. <input type="checkbox"/>				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C3
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Raffi Gostanian/			Date (YYYY-MM-DD)	
First Name	Raffi	Last Name	Gostanian	Registration Number	42595
Additional Signature may be generated within this form by selecting the Add button.					



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/149,518	05/09/2016	2842	1600	AVAIL0109-C3	20	3

CONFIRMATION NO. 3459

FILING RECEIPT



0000000083099703

84646
 Haynes and Boone, LLP (48731)
 IP Docketing
 2323 Victory Avenue
 Suite 700
 Dallas, TX 75219

Date Mailed: 05/24/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Allan Havemose, Arroyo Grande, CA;

Applicant(s)

OPEN INVENTION NETWORK LLC, Durham, NC;

Power of Attorney: The patent practitioners associated with Customer Number 84646

Domestic Priority data as claimed by applicant

This application is a CON of 14/606,175 01/27/2015 PAT 9336045
 which is a CON of 13/708,477 12/07/2012 PAT 8943500
 which is a CON of 12/421,691 04/10/2009 PAT 8341631

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/23/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/149,518**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

Title

SYSTEM AND METHOD FOR APPLICATION ISOLATION

Preliminary Class

333

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 15/149,518	
Substitute for Form PTO-875							
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)	OR	RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 = *			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *				x 420 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
			TOTAL			TOTAL	1600
* If the difference in column 1 is less than zero, enter "0" in column 2.							
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	OR	RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	OR	RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.							



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/149,518	05/09/2016	Allan Havemose	AVAIL0109-C3	3459
84646 7590 11/14/2016 Haynes and Boone, LLP (48731) IP Docketing 2323 Victory Avenue Suite 700 Dallas, TX 75219			EXAMINER	
			WU, QING YUAN	
			ART UNIT	PAPER NUMBER
			2199	
			NOTIFICATION DATE	DELIVERY MODE
			11/14/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

michele.zarinelli@gmail.com
 patentpatent@gmail.com
 ipdocketing@haynesboone.com

Office Action Summary**Application No.**
15/149,518**Applicant(s)**
HAVEMOSE, ALLAN**Examiner**
QING WU**Art Unit**
2199**AIA (First Inventor to File)
Status**
No**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/9/16.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-20 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) _____ is/are allowed.
- 7) ☒ Claim(s) 1-20 is/are rejected.
- 8) ☐ Claim(s) _____ is/are objected to.
- 9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 5/6/16 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____
- 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 4) ☐ Other: _____

Application/Control Number: 15/149,518
Art Unit: 2199

Page 2

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the claims at issue are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the reference application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope

Application/Control Number: 15/149,518

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Art Unit: 2199

of a joint research agreement. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO internet Web site contains terminal disclaimer forms which may be used. Please visit <http://www.uspto.gov/forms/>. The filing date of the application will determine what form should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to <http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp>.

Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 3-12 of U.S. Patent No. 8,341,631 (hereafter '631). Although the claims at issue are not identical, they are not patentably distinct from each other because claims 1-20 are anticipated by claims 1 and 3-12 patent '631 such that claims 1 and 3-12 of patent '631 contain all the limitations of claims 1- 20 of the instant application. Claims 1-20 of the instant application therefore are not patently distinct from claims 1 and 3-12 of patent '631 and as such are unpatentable for obviousness-type double patenting.

Claims 1-20 are additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 8,943,500 (hereafter '500). Although the claims at issue are not identical, they are not patentably distinct from each other because claims 1-20 are anticipated by claims 1-20 of patent '500 such that claims 1-20 of patent '500 contain all the limitations of claims 1- 20 of the instant application. Claims 1-20 of the instant application

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therefore are not patently distinct from claims 1-20 of patent '500 and as such are unpatentable for obviousness-type double patenting.

Claims 1-20 are additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 9,336,045 (hereafter '045). Although the claims at issue are not identical, they are not patentably distinct from each other because claims 1-20 are anticipated by claims 1-20 of patent '045 such that claims 1-20 of patent '045 contain all the limitations of claims 1-20 of the instant application. Claims 1-20 of the instant application therefore are not patently distinct from claims 1-20 of patent '045 and as such are unpatentable for obviousness-type double patenting.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 1 is rejected under 35 U.S.C. 101 because it is a system claim directed to software alone without claiming associated computer hardware required for execution, and software alone fails to fall within a statutory category of invention. As recited in the claim “isolated environments”, “interception layers”, and “interception database” are nonetheless software modules/data-structure/functionalities. Applicant should consider claiming computer hardware

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as a part of the system to overcome the outstanding 35 USC 101 rejection. Claims 2-13 are rejected for failing to cure the deficiency of independent claim 1.

Allowable Subject Matter

5. Claims 1-20 would be allowable by overcoming the double patenting and/or 35 U.S.C. 101 above.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 7,673,308 were cited in parent applications directed to application isolation; “Understanding AIE to Citrix Presentation Server 4” teaches concept of application isolation.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to QING WU whose telephone number is (571)272-3776. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis A. Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QING-YUAN WU/
Primary Examiner, Art Unit 2199

Notice of References Cited	Application/Control No. 15/149,518		Applicant(s)/Patent Under Reexamination HAVEMOSE, ALLAN	
	Examiner QING WU		Art Unit 2199	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-7,673,308 B2	03-2010	McMillan; John	G06F9/45537	717/127
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				


FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Medina, Rodney, "Understanding AIE to Citrix Presentation Server 4", May 12, 2005, Tech Target.
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 	Application/Control No. 15149518	Applicant(s)/Patent Under Reexamination HAVEMOSE, ALLAN
	Examiner QING WU	Art Unit 2199

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc. [Combination of classification and text search in EAST - see search history]	11/7/2016	QW
Inventor name search	11/7/2016	QW
NPL search in Google	11/7/2016	QW

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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BIB DATA SHEET

CONFIRMATION NO. 3459

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
15/149,518	05/09/2016	717	2199	AVAIL0109-C3		
RULE						
APPLICANTS OPEN INVENTION NETWORK LLC, Durham, NC; INVENTORS Allan Havemose, Arroyo Grande, CA; ** CONTINUING DATA ***** This application is a CON of 14/606,175 01/27/2015 PAT 9336045 which is a CON of 13/708,477 12/07/2012 PAT 8943500 which is a CON of 12/421,691 04/10/2009 PAT 8341631 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 05/23/2016						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/QING WU/</u> Examiner's Signature		<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 10	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS Haynes and Boone, LLP (48731) IP Docketing 2323 Victory Avenue Suite 700 Dallas, TX 75219 UNITED STATES						
TITLE SYSTEM AND METHOD FOR APPLICATION ISOLATION						
FILING FEE RECEIVED 1600	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	22	("14606175", "13708477", "12421691")	US-PGPUB; USPAT	OR	OFF	2016/11/07 15:28
L2	4	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/07 15:51
L3	43	orphan\$3 with (virtual near machine (vm))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/07 16:51
L4	497865	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/11/07 16:51
L5	9	L4 and I3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/11/07 16:51
L6	86143	(sandbox isolat\$3) with (remov\$3 uninstall\$5)	USPAT	OR	ON	2016/11/07 16:59
L7	1768	(sandbox isolat\$3 mapping) with (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2016/11/07 17:01
L8	571	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2016/11/07 17:03
L9	90	L4 and I8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/11/07 17:03
L10	57	I9 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/07 17:03

S1	1	"20100262970"	US-PGPUB; USPAT	OR	OFF	2012/03/08 14:42
S2	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2012/03/13 15:00
S3	34	S2 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2012/03/13 15:03
S4	4926	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 15:59
S5	135407	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 16:00
S6	905	S4 and S5	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 16:00
S7	782	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 16:01
S8	242	S7 and S5	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 16:01
S9	228	S8 and ((@ad< "20090410") or	US-PGPUB;	OR	ON	2012/03/13

		(@prad<"20090410") or (@rlad<"20090410"))	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			16:02
S10	435	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 16:02
S11	144	S10 and S5	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 16:03
S12	133	S11 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/03/13 16:03
S14	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2012/03/14 15:21
S15	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2012/03/14 15:23
S16	12	("6574618" "7127713" "7207039" "7213246" "7370071" "7447896" "7467370" "7512815" "7613921" "7761573" "8065714" "8171483").PN.	US-PGPUB; USPAT	OR	OFF	2012/08/21 17:08
S17	1	"20100262970"	US-PGPUB; USPAT	OR	OFF	2012/08/21 17:18
S18	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2012/08/21 17:18
S19	34	S18 and (isolat\$3 intercept\$3 redirect\$3	US-PGPUB;	OR	OFF	2012/08/21

		mapp\$3)	USPAT			17:18
S20	5275	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S21	139734	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S22	967	S20 and S21	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S23	830	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S24	254	S23 and S21	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S25	237	S24 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S26	465	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S27	152	S26 and S21	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S28	138	S27 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:18
S29	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2012/08/21 17:18
S30	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2012/08/21 17:18
S31	162	(application software process program)	US-PGPUB;	OR	ON	2012/08/21

		near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:20
S32	8	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/21 17:27
S33	1	"20100023996"	US-PGPUB; USPAT	OR	OFF	2012/08/21 17:57
S34	1	"20120054486"	US-PGPUB; USPAT	OR	OFF	2012/08/21 17:58
S38	1	"8341631".pn.	US-PGPUB; USPAT	OR	OFF	2014/06/04 12:27
S39	1	"12421694"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/06/04 13:08
S40	2	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/06/04 13:09
S41	0	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/06/04 13:26
S44	245	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927" "20030028635" "20030069993" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659" "20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086" "6105148" "6144999" "6154877" "6161219" "6189111" "6269442")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/06/04 14:30

		"6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538" "6766314" "6823474" "7028305" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963" "7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.				
S45	67595	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/06/04 14:39
S46	94	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstal\$5)	USPAT	OR	ON	2014/06/04 14:39
S47	175209	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/06/04 14:56
S48	17	S45 and S46	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/06/04 14:56
S55	2	"12421694"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/09/12 15:00
S56	8	"8341631"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/09/12 15:01
S57	74165	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/12 15:06
S58	101	(application software process program)	USPAT	OR	ON	2014/09/12

		near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)				15:06
S59	18	S57 and S58	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/12 15:06
S60	183130	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/09/12 15:18
S61	602	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/09/12 15:18
S62	195	S61 and S60	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/09/12 15:18
S63	158	S62 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/09/12 15:18
S64	352026	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/12 15:43
S65	34	S64 and S58	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/12 15:44
S71	1	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:20
S72	62	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT;	OR	ON	2015/08/05 17:21

			IBM_TDB			
S74	34	S73 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2015/08/05 17:21
S75	8471	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S76	202236	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S77	1397	S75 and S76	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S78	1359	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S79	364	S78 and S76	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S80	282	S79 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S81	673	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S82	215	S81 and S76	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S83	162	S82 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S85	34	S84 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2015/08/05 17:21
S86	8471	(application software process program)	US-PGPUB;	OR	ON	2015/08/05

		with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:21
S87	202236	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S88	1397	S86 and S87	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S89	1359	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S90	364	S89 and S87	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S91	282	S90 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S92	673	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S93	215	S92 and S87	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S94	162	S93 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S95	270	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S96	18	(application software process program)	US-PGPUB;	OR	ON	2015/08/05

		near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:21
S98	91761	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/08/05 17:21
S99	131	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2015/08/05 17:21
S100	219989	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/08/05 17:21
S101	23	S98 and S99	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/08/05 17:21
S102	91761	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/08/05 17:21
S103	131	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2015/08/05 17:21
S104	23	S102 and S103	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/08/05 17:21
S105	202236	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S106	673	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2	US-PGPUB; USPAT; FPRS;	OR	ON	2015/08/05 17:21

		(resource interface memor\$3 file font librar\$3 device storage))	EPO; JPO; DERWENT; IBM_TDB			
S107	215	S106 and S105	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S108	162	S107 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/05 17:21
S109	412087	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/08/05 17:21
S110	44	S109 and S103	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/08/05 17:21
S125	1	"8943500".pn.	US-PGPUB; USPAT	OR	OFF	2015/12/21 15:59
S126	237426	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S127	2	"20100262970"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S128	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53

		"6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S129	34	S128 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S130	8951	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S131	206056	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S132	1409	S130 and S131	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S133	1445	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S134	366	S133 and S131	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S135	282	S134 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S136	701	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S137	217	S136 and S131	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S138	162	S137 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT;	OR	ON	2015/12/21 16:53

			IBM_TDB			
S139	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S140	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S141	12	("6574618" "7127713" "7207039" "7213246" "7370071" "7447896" "7467370" "7512815" "7613921" "7761573" "8065714" "8171483").PN.	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S142	2	"20100262970"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S143	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S144	34	S143 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S145	8951	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S146	206056	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S147	1409	S145 and S146	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S148	1445	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3	US-PGPUB; USPAT;	OR	ON	2015/12/21 16:53

		redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S149	366	S148 and S146	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S150	282	S149 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S151	701	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S152	217	S151 and S146	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S153	162	S152 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S154	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S155	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S156	286	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S157	18	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S158	2	"20100023996"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S159	1	"20120054486"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S160	1	"8341631".pn.	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S161	3	"12421694"	US-PGPUB; USPAT; FPRS;	OR	ON	2015/12/21 16:53

			EPO; JPO; DERWENT; IBM_TDB			
S162	3	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S163	1	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S164	248	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927" "20030028635" "20030069993" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659" "20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086" "6105148" "6144999" "6154877" "6161219" "6189111" "6269442" "6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538" "6766314" "6823474" "7028305" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963" "7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S165	94749	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53

S166	141	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2015/12/21 16:53
S167	237426	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S168	23	S165 and S166	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S169	3	"12421694"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S170	14	"8341631"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S171	94749	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S172	141	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2015/12/21 16:53
S173	23	S171 and S172	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S174	206056	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S175	701	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2	US-PGPUB; USPAT; FPRS;	OR	ON	2015/12/21 16:53

		(resource interface memor\$3 file font librar\$3 device storage))	EPO; JPO; DERWENT; IBM_TDB			
S176	217	S175 and S174	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S177	162	S176 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S178	440995	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S179	47	S178 and S172	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S180	1	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S181	66	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S182	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499"	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53

		"6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S183	34	S182 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S184	8951	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S185	206056	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S186	1409	S184 and S185	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S187	1445	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S188	366	S187 and S185	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S189	282	S188 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S190	701	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S191	217	S190 and S185	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S192	162	S191 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT;	OR	ON	2015/12/21 16:53

			IBM_TDB			
S193	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S194	34	S193 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2015/12/21 16:53
S195	8951	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S196	206056	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S197	1409	S195 and S196	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S198	1445	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S199	366	S198 and S196	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S200	282	S199 and ((@ad<"20090410") or (@prad<"20090410") or	US-PGPUB; USPAT;	OR	ON	2015/12/21 16:53


		(@rlad<"20090410"))	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S201	701	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S202	217	S201 and S196	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S203	162	S202 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S204	286	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S205	18	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S206	94749	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S207	141	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2015/12/21 16:53
S208	237426	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S209	23	S206 and S207	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53

S210	94749	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S211	141	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2015/12/21 16:53
S212	23	S210 and S211	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S213	206056	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S214	701	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S215	217	S214 and S213	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S216	162	S215 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/12/21 16:53
S217	440995	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S218	47	S217 and S211	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/12/21 16:53
S219	1	"14749422"	US-PGPUB; USPAT; USOCR;	OR	OFF	2015/12/21 17:00

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
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<i>Index of Claims</i> 	Application/Control No. 15149518	Applicant(s)/Patent Under Reexamination HAVEMOSE, ALLAN
	Examiner QING WU	Art Unit 2199

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47			
CLAIM		DATE							
Final	Original	11/07/2016							
	1	✓							
	2	✓							
	3	✓							
	4	✓							
	5	✓							
	6	✓							
	7	✓							
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	16	✓							
	17	✓							
	18	✓							
	19	✓							
	20	✓							

6 Weeks Ago

5 Weeks Ago

4 Weeks Ago

3 Weeks Ago

2 Weeks Ago

Last Week

Today

bluecoat-06.uspto (bluecoat-06.uspto.gov)

Computer

discussions.citrix (discussions.citrix.com)

es

expoweb1

expoweb2

google (www.google.ch)

google (www.google.com)

application isolation environment - Google Search

application oriented sandbox - Google Search

removing application isolation environment - Google Search

removing sandbox or isolated environment as result of application r...

uninstallation of application removes isolated environment - Googl...

uninstallation of application removes mapping - Google Search

uninstallation of application removes mapping redirecting - Google ...

uninstalling application isolation environment - Google Search

opim-db-1.uspto (opim-db-1.uspto.gov)

opm (www.opm.gov)

palmapps.uspto (palmapps.uspto.gov)

ptoweb.uspto (ptoweb.uspto.gov)

redcort (www.redcort.com)

uspto-oacxp-fs.uspto (uspto-oacxp-fs.uspto.gov)

w-prsboip

Doc Code: DIST.E.FILE**Document Description: Electronic Terminal Disclaimer - Filed**U.S. Patent and Trademark Office
Department of Commerce

Electronic Petition Request	TERMINAL DISCLAIMER TO OBIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT
Application Number	15149518
Filing Date	09-May-2016
First Named Inventor	Allan Havemose
Attorney Docket Number	AVAIL0109-C3
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
OPEN INVENTION NETWORK LLC	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

8341631

8943500

9336045

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.
- ☐ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

- ☐ Small Entity
- ☐ Micro Entity
- ☒ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- ☒ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application
- Registration Number 42595
- ☐ A sole inventor
- ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- ☐ A joint inventor; all of whom are signing this request

Signature	/Raffi Gostanian/
Name	Raffi Gostanian

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	15149518			
Filing Date:	09-May-2016			
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION			
First Named Inventor/Applicant Name:	Allan Havemose			
Filer:	Raffi Gostanian			
Attorney Docket Number:	AVAIL0109-C3			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				160

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 15149518

Filing Date: 09-May-2016

Applicant/Patent under Reexamination: Havemose

Electronic Terminal Disclaimer filed on February 14, 2017

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	28351825
Application Number:	15149518
International Application Number:	
Confirmation Number:	3459
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Raffi Gostanian
Filer Authorized By:	
Attorney Docket Number:	AVAIL0109-C3
Receipt Date:	14-FEB-2017
Filing Date:	09-MAY-2016
Time Stamp:	14:57:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 160
RAM confirmation Number	021517INTEFSW00001346505904
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	33974	no	2
			8c6840c8a2d3070f223168819765502b60845aef		

Warnings:**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	30262	no	2
			f2ab70544182ad0c3c264766a60ebaf54813db50		

Warnings:**Information:**

Total Files Size (in bytes):			64236
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Open Invention Network **Docket:** AVAIL0109-C3
LLC

Serial No.: 15/149,518 **Art Unit:** 2199

Filed: 05-09-2016 **Examiner:** Wu, Qing Yuan

Title: SYSTEM AND METHOD FOR APPLICATION ISOLATION

AMENDMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the Non-Final Rejection (“Office Action”) dated 11/14/2016, please submit the following amendments and arguments:

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 6 of this paper.

Electronic Acknowledgement Receipt

EFS ID:	28352069
Application Number:	15149518
International Application Number:	
Confirmation Number:	3459
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Raffi Gostanian
Filer Authorized By:	
Attorney Docket Number:	AVAIL0109-C3
Receipt Date:	14-FEB-2017
Filing Date:	09-MAY-2016
Time Stamp:	15:05:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	AVAIL0109_C3_15149518_Transmittal.pdf	264704 44c8bb46200327524dd99d1d4a2ea4c90e6baa27	no	2

Warnings:

Information:					
2		AVAIL0109_C3_15149518_Response.pdf	118479 dd9528ceb3413853fa66f15a3dc62705e8f6bea7	yes	8
Multipart Description/PDF files in .zip description					
Document Description			Start	End	
Applicant Arguments/Remarks Made in an Amendment			6	8	
Claims			2	5	
Amendment/Req. Reconsideration-After Non-Final Reject			1	1	
Warnings:					
Information:					
Total Files Size (in bytes):			383183		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	15/149,518	
	Filing Date	05-09-2016	
	First Named Inventor	Allan Havemose	
	Art Unit	2199	
	Examiner Name	WU, QING YUAN	
Total Number of Pages in This Submission	10	Attorney Docket Number	AVAIL0109-C3

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input checked="" type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	Remarks	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	RGIP LLC		
Signature	/Raffi Gostanian/		
Printed name	Raffi Gostanian		
Date	02/14/2017	Reg. No.	42595

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature	/Candace Guzman/		
Typed or printed name	Candace Guzman	Date	02/14/2017

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

REMARKS

Double Patenting

Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 3-12 of U.S. Patent No. 8,341,631.

Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 -20 of U.S. Patent No. 8,943,500.

Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 -20 of U.S. Patent No. 9,336,045.

An electronic terminal disclaimer is being filed to overcome the double patenting rejection.

Claim Rejections - 35 USC§ 101

Claim 1 is rejected under 35 U.S.C. 101 because it is a system claim directed to software alone without claiming associated computer hardware required for execution, and software alone fails to fall within a statutory category of invention. As recited in the claim "isolated environments", "interception layers", and "interception database" are nonetheless software modules/data-structure/functionalities. Applicant should consider claiming computer hardware as a part of the system to overcome the outstanding 35 USC 101 rejection. Claims 2-13 are rejected for failing to cure the deficiency of independent claim 1.

Applicant has amended claim 1 to overcome the 101 rejection.

Allowable Subject Matter

Claims 1-20 would be allowable by overcoming the double patenting and/or 35 U.S.C. 101 rejection. Applicant thanks the Examiner for pointing out the allowable subject matter.

CONCLUSION

Although Applicant has focused the remarks and/or amendments on or primarily on the independent claims in order to expedite the prosecution of the instant application, Applicant reserves the right to remark on and/or amend any of the dependent claims at any time. The mere fact that Applicant has not remarked on and/or amended any of the dependent claims at this time, either related to an Official Notice rejection or not, is unequivocally not an admission of prior art.

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application.

Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution.

Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at any time.

	Respectfully submitted,
	RGIP LLC 1103 Twin Creeks Drive Allen, TX 75013 Phone: (972) 849-1310
Dated: 2/14/2017	<u>/Raffi Gostanian/</u>
	Raffi Gostanian Reg. No. 42,595 Docket No. AVAIL0109-C3

Amendment to the Claims:

Please make the following amendments to the claims:

1. (Currently Amended) A system, comprising:
one or more central processing units; and
one or more isolated environments including one or more applications~~and executables~~;
wherein the one or more central processing units and the one or more isolated
environments are configured to interact with each other;
wherein the one or more isolated environments are created during installation of the one or more applications;
wherein updates to the one or more isolated environments occur as the one or more applications use additional resources; and
wherein the one or more isolated environments are copied to storage and then removed as part of an uninstall of the one or more applications.
2. (Original) The system according to claim 1, wherein the one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments.
3. (Original) The system according to claim 1 comprising one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces.
4. (Original) The system according to claim 3, wherein the one or more interception layers intercept calls to the host operating system and system libraries created by the one or more applications.
5. (Original) The system according to claim 1 comprising an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside.

6. (Original) The system according to claim 5, wherein the interception database translates parameters and contexts between a host environment and the one or more isolated environments.
7. (Original) The system according to claim 1, wherein the one or more isolated environments are stored on a local storage.
8. (Original) The system according to claim 1, wherein the one or more isolated environments are stored on a networked storage and the one or more applications are delivered over a network.
9. (Original) The system according to claim 1, wherein each of the one or more applications is installed into its own isolated environment.
10. (Original) The system according to claim 1, wherein two or more applications are installed into a shared isolated environment.
11. (Original) The system according to claim 10, wherein the two or more applications share resources inside the shared isolated environment.
12. (Original) The system according to claim 1, wherein two or more applications are installed into separate isolated environments and the one or more applications run concurrently in the separate isolated environments.
13. (Original) The system according to claim 1, wherein a first application of the one or more applications is installed twice into separate isolated environments, and the separate isolated environments run concurrently and independently.

14. (Original) A method, comprising:

creating one or more isolated environments during installation of one or more applications;

updating the one or more isolated environments as the one or more applications use additional resources; and

removing the one or more isolated environments as part of uninstalling the one or more applications.

15. (Original) The method of claim 14 comprising intercepting access to system resources and interfaces at one or more interception layers.

16. (Original) The method of claim 15 comprising maintaining mapping between the system resources inside the one or more isolated environments and outside.

17. (Original) The method of claim 14 comprising isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

18. (Original) A non-transitory computer readable storage medium comprising instructions for:

creating one or more isolated environments during installation of one or more applications;

updating the one or more isolated environments as the one or more applications use additional resources; and

removing the one or more isolated environments as part of uninstalling the one or more applications.

19. (Original) The non-transitory computer readable storage medium of claim 18 comprising instructions for maintaining mapping between the system resources inside the one or more isolated environments and outside.

20. (Original) The non-transitory computer readable storage medium of claim 19 comprising instructions for isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 15/149,518		Filing Date 05/09/2016		<input type="checkbox"/> To be Mailed			
ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO												
APPLICATION AS FILED – PART I												
(Column 1)			(Column 2)									
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)				
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A						
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A						
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A						
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =						
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =						
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).										
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))												
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL						
APPLICATION AS AMENDED – PART II												
(Column 1)			(Column 2)			(Column 3)						
AMENDMENT	02/14/2017		CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		* 20		Minus	** 20	= 0		X \$80 =		0	
	Independent (37 CFR 1.16(h))		* 3		Minus	*** 3	= 0		X \$420 =		0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
									TOTAL ADD'L FEE		0	
(Column 1)			(Column 2)			(Column 3)						
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		*		Minus	**	=		X \$ =			
	Independent (37 CFR 1.16(h))		*		Minus	***	=		X \$ =			
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
									TOTAL ADD'L FEE			
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>												

SLIE
NICOL D. SCOTT

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

84646 7590 03/01/2017
 Haynes and Boone, LLP (48731)
 IP Docketing
 2323 Victory Avenue
 Suite 700
 Dallas, TX 75219

EXAMINER

WU, QING YUAN

ART UNIT

PAPER NUMBER

2199

DATE MAILED: 03/01/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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15/149,518

05/09/2016

Allan Havemose

AVAIL0109-C3

3459

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLICATION ISOLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	06/01/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

84646 7590 03/01/2017
Haynes and Boone, LLP (48731)
IP Docketing
2323 Victory Avenue
Suite 700
Dallas, TX 75219

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/149,518	05/09/2016	Allan Havemose	AVAIL0109-C3	3459

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLICATION ISOLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	06/01/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
WU, QING YUAN	2199	717-169000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/149,518	05/09/2016	Allan Havemose	AVAIL0109-C3	3459

84646 7590 03/01/2017
 Haynes and Boone, LLP (48731)
 IP Docketing
 2323 Victory Avenue
 Suite 700
 Dallas, TX 75219

EXAMINER

WU, QING YUAN

ART UNIT	PAPER NUMBER
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2199

DATE MAILED: 03/01/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/149,518	Applicant(s) HAVEMOSE, ALLAN	
	Examiner QING WU	Art Unit 2199	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed on 2/14/17.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material 4. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____	5. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 6. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance 7. <input type="checkbox"/> Other _____
--	---

/QING WU/ Primary Examiner, Art Unit 2199	
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Application/Control Number: 15/149,518
Art Unit: 2199

Page 2

The present application is being examined under the pre-AIA first to invent provisions.

Examiner's Comment

1. The terminal disclaimer filed on 2/14/17 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patents 8,341,631, 8,943,500 and 9,336,045 has been reviewed and is accepted. The terminal disclaimer has been recorded.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to QING WU whose telephone number is (571)272-3776. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis A. Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 15/149,518
Art Unit: 2199

Page 3

/QING WU/
Primary Examiner, Art Unit 2199

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	34	L2 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:26
L4	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L5	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L6	1464	L4 and L5	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L7	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L8	374	L7 and L5	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L9	283	L8 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L10	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L11	220	L10 and L5	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26

L12	162	L11 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L18	34	L17 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:26
L19	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L20	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L21	1464	L19 and L20	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L22	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L23	374	L22 and L20	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L24	283	L23 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L25	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L26	220	L25 and L20	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L27	162	L26 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2017/02/22 17:26

			DERWENT; IBM_TDB			
L30	329	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L31	25	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L37	4	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L38	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26
L41	256	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927" "20030028635" "20030069993" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659" "20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086" "6105148" "6144999" "6154877" "6161219" "6189111" "6269442" "6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538" "6766314" "6823474" "7028305" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:26

		"7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.				
L42	101894	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:26
L43	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:26
L44	294207	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:26
L45	23	L42 and L43	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:26
L54	101894	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:26
L55	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:26
L56	23	L54 and L55	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:26
L57	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L58	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2017/02/22 17:27

		librar\$3 device storage))	DERWENT; IBM_TDB			
L59	220	L58 and L57	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L60	162	L59 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L61	543990	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L62	60	L61 and L55	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L68	2	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L69	78	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L70	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314"	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27

		"7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
L71	34	L70 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27
L72	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L73	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L74	1464	L72 and L73	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L75	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L76	374	L75 and L73	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L77	283	L76 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L78	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L79	220	L78 and L73	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L80	162	L79 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27

L81	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27
L82	34	L81 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27
L83	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L84	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L85	1464	L83 and L84	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L86	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L87	374	L86 and L84	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L88	283	L87 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2017/02/22 17:27

			DERWENT; IBM_TDB			
L89	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L90	220	L89 and L84	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L91	162	L90 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L92	329	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L93	25	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L94	101894	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L95	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L96	294207	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L97	23	L94 and L95	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L98	101894	"726"/\$.ccls.	US-PGPUB;	OR	OFF	2017/02/22

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:27
L99	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L100	23	L98 and L99	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L101	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L102	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L103	220	L102 and L101	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L104	162	L103 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L105	543990	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L106	60	L105 and L99	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L122	294207	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2017/02/22 17:27

			EPO; JPO; DERWENT; IBM_TDB			
L125	34	L124 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27
L126	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L127	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L128	1464	L126 and L127	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L129	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L130	374	L129 and L127	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L131	283	L130 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L132	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L133	220	L132 and L127	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L134	162	L133 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L140	34	L139 and (isolat\$3 intercept\$3	US-PGPUB;	OR	OFF	2017/02/22

		redirect\$3 mapp\$3)	USPAT			17:27
L141	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L142	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L143	1464	L141 and L142	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L144	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L145	374	L144 and L142	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L146	283	L145 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L147	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L148	220	L147 and L142	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L149	162	L148 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L152	329	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT;	OR	ON	2017/02/22 17:27

		uninstall\$5)	IBM_TDB			
L153	25	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L158	4	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L159	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L160	101894	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L161	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L162	294207	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L163	23	L160 and L161	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L166	101894	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L167	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L168	23	L166 and L167	US-PGPUB;	OR	OFF	2017/02/22

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:27
L169	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L170	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L171	220	L170 and L169	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L172	162	L171 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L173	543990	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L174	60	L173 and L167	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L175	2	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L176	78	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L177	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645"	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27

		"7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
L178	34	L177 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27
L179	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L180	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L181	1464	L179 and L180	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L182	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L183	374	L182 and L180	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L184	283	L183 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L185	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3	US-PGPUB; USPAT;	OR	ON	2017/02/22 17:27

		redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	FPRS; EPO; JPO; DERWENT; IBM_TDB			
L186	220	L185 and L180	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L187	162	L186 and (((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L188	10480	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L189	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L190	1464	L188 and L189	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L191	1690	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L192	374	L191 and L189	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L193	283	L192 and (((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L194	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L195	220	L194 and L189	US-PGPUB; USPAT;	OR	ON	2017/02/22 17:27

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
L196	162	L195 and (((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L197	329	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L198	25	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L199	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L200	294207	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L201	101894	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L202	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L203	23	L201 and L202	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L204	212731	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27

L205	783	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L206	220	L205 and L204	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L207	162	L206 and (((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L208	543990	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L209	60	L208 and L202	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L224	47	orphan\$3 with (virtual near machine (vm))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L225	543990	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L226	11	L225 and L224	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L227	87702	(sandbox isolat\$3) with (remov\$3 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L228	1812	(sandbox isolat\$3 mapping) with (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2017/02/22 17:27
L229	583	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2017/02/22 17:27

L230	94	L225 and L229	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:27
L231	58	L230 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/22 17:27
L232	575706	G06F9/4\$2.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:35
L233	131	(G06F9/4\$2.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.) and (sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/22 17:35

EAST Search History (Interference)


Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L34	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US- PGPUB; USPAT	OR	ON	2017/02/22 17:26
L47	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US- PGPUB; USPAT	OR	ON	2017/02/22 17:26
L50	9419	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/00.cpc. G06F21/53.cpc. G06F21/6218.cpc.	USPAT	OR	OFF	2017/02/22 17:26
L51	23	L50 and L47	US- PGPUB; USPAT	OR	ON	2017/02/22 17:26
L64	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L66	3858	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/008.cpc.	USPAT	OR	OFF	2017/02/22 17:27
L107	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US- PGPUB; USPAT	OR	ON	2017/02/22 17:27

L110	5380	"726"/2.ccls.	US-PGPUB; USPAT	OR	OFF	2017/02/22 17:27
L111	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L112	14	L110 and L111	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L113	6212	718/100,104.ccls.	USPAT	OR	ON	2017/02/22 17:27
L114	9419	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/00.cpc. G06F21/53.cpc. G06F21/6218.cpc.	USPAT	OR	OFF	2017/02/22 17:27
L115	23	L114 and L111	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L116	6682	718/1,104.ccls. 714/1.ccls.	USPAT	OR	OFF	2017/02/22 17:27
L117	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L118	25	L116 and L117	USPAT	OR	ON	2017/02/22 17:27
L119	3858	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/008.cpc.	USPAT	OR	OFF	2017/02/22 17:27
L120	14	L119 and L117	USPAT	OR	ON	2017/02/22 17:27
L210	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L211	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L212	9419	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/00.cpc. G06F21/53.cpc. G06F21/6218.cpc.	USPAT	OR	OFF	2017/02/22 17:27
L213	23	L212 and L211	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L214	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L215	3858	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/008.cpc.	USPAT	OR	OFF	2017/02/22 17:27
L216	14	L215 and L214	USPAT	OR	ON	2017/02/22 17:27

L217	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L218	326	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L219	9419	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/00.cpc. G06F21/53.cpc. G06F21/6218.cpc.	USPAT	OR	OFF	2017/02/22 17:27
L220	23	L219 and L218	US-PGPUB; USPAT	OR	ON	2017/02/22 17:27
L221	163	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2017/02/22 17:27
L222	3858	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/008.cpc.	USPAT	OR	OFF	2017/02/22 17:27
L223	14	L222 and L221	USPAT	OR	ON	2017/02/22 17:27
L234	3850	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/00.cpc.	USPAT	OR	OFF	2017/02/22 17:50
L235	78	(remov\$3 delet\$3) with (virtual near machine (vm)(isolat\$3 near2 environment)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT	OR	ON	2017/02/22 17:51
L236	0	L234 and L235	US-PGPUB; USPAT	OR	ON	2017/02/22 17:52
L237	82	(remov\$3 delet\$3) with (virtual near machine (vm)(isolat\$3 near2 environment)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT	OR	ON	2017/02/22 17:52
L238	3	L234 and L237	US-PGPUB; USPAT	OR	ON	2017/02/22 17:53

2/ 22/ 2017 5:53:35 PM

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Search Notes 	Application/Control No. 15149518	Applicant(s)/Patent Under Reexamination HAVEMOSE, ALLAN
	Examiner QING WU	Art Unit 2199

CPC- SEARCHED		
Symbol	Date	Examiner


CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
G06F9/4\$2.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc. [Combination of classification and text search in EAST - see search history]	2/22/2017	QW
Updated inventor name search	2/22/2017	QW
NPL search in Google	2/22/2017	QW

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
G06F	9/46, 445, 50; 11/008	2/22/2017	QW


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Issue Classification 	Application/Control No. 15149518	Applicant(s)/Patent Under Reexamination HAVEMOSE, ALLAN
	Examiner QING WU	Art Unit 2199

CPC						
Symbol					Type	Version
G06F		9	/	46	F	2013-01-01
G06F		8	/	62	I	2013-01-01
G06F		9	/	461	I	2013-01-01
G06F		9	/	455	I	2013-01-01
G06F		11	/	00	A	2013-01-01
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CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)		20	
/QING WU/ Primary Examiner.Art Unit 2199	02/22/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2




















Issue Classification 	Application/Control No. 15149518	Applicant(s)/Patent Under Reexamination HAVEMOSE, ALLAN
	Examiner QING WU	Art Unit 2199

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION									
CLASS			SUBCLASS			CLAIMED					NON-CLAIMED				
						G	0	6	F	9 / 445 (2006.0)					
CROSS REFERENCE(S)						G	0	6	F	9 / 455 (2006.0)					
						G	0	6	F	9 / 46 (2006.0)					
						G	0	6	F	11 / 00 (2006.01.01)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)														

NONE		Total Claims Allowed:	
		20	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/QING WU/ Primary Examiner.Art Unit 2199	02/22/2017	1	2
(Primary Examiner)	(Date)		

[illegible]

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/QING WU/ Primary Examiner.Art Unit 2199	02/22/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

 6 Weeks Ago 5 Weeks Ago 4 Weeks Ago 3 Weeks Ago 2 Weeks Ago Last Week Tuesday Today bluecoat-08.uspto (bluecoat-08.uspto.gov) Computer discussions.citrix (discussions.citrix.com) expoweb1 expoweb2 google (www.google.com) dynamic sandbox creation - Google Search uninstalling application removes isolation environment - Google Se... uninstalling application removes sandbox - Google Search ieeexplore.ieee (ieeexplore.ieee.org) opim-db-1.uspto (opim-db-1.uspto.gov) uspto-oacexp-fs.uspto (uspto-oacexp-fs.uspto.gov) webta.uspto (webta.uspto.gov) w-prsboip w-ptofax

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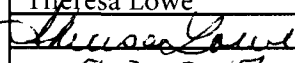
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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Theresa Lowe	(Depositor's name)
	(Signature)
5-31-2017	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/149,518	05/09/2016	Allan Havemose	AVAIL0109-C3	3459

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLICATION ISOLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	06/01/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
WU, QING YUAN	2199	717-169000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Haynes and Boone, LLP

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

Open Invention Network LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Durham, North Carolina

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.

☒ Payment by credit card. Form PTO-2038 is attached.

☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 081394 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Typed or printed name Adam C. Fowles

Date

MAY 31, 2017

Registration No.

65,005

Electronic Patent Application Fee Transmittal

Application Number:	15149518			
Filing Date:	09-May-2016			
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION			
First Named Inventor/Applicant Name:	Allan Havemose			
Filer:	Adam Carl Fowles/Theresa Lowe			
Attorney Docket Number:	AVAIL0109-C3			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				960

Electronic Acknowledgement Receipt

EFS ID:	29351292
Application Number:	15149518
International Application Number:	
Confirmation Number:	3459
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Adam Carl Fowles/Theresa Lowe
Filer Authorized By:	Adam Carl Fowles
Attorney Docket Number:	AVAIL0109-C3
Receipt Date:	31-MAY-2017
Filing Date:	09-MAY-2016
Time Stamp:	11:27:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$960
RAM confirmation Number	053117INTEFSW11282400
Deposit Account	081394
Authorized User	Theresa Lowe

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	48731_775US04_Issue_Fee.pdf	76405	no	1
			8f32120d2baf1bddaf008d808679f6348af3608d		

Warnings:**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	30414	no	2
			2e80126a254cd58dcb61d735b330336a72eccafb		

Warnings:**Information:**

Total Files Size (in bytes):	106819
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/149,518	07/04/2017	9697038	AVAIL0109-C3	3459

84646 7590 06/14/2017

Haynes and Boone, LLP (48731)
 IP Docketing
 2323 Victory Avenue
 Suite 700
 Dallas, TX 75219

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

OPEN INVENTION NETWORK LLC, Durham, NC;
 Allan Havemose, Arroyo Grande, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IN THE UNITED STATES PATENT AND TRADEMARK
OFFICE

**REVOCATION AND POWER OF
ATTORNEY AND
CHANGE OF CORRESPONDENCE ADDRESS**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In accordance with 37 C.F.R. Section 1.36, M.P.E.P. Section 402.05 and 402.07, please revoke any existing Powers of Attorney for the below listed applications, and appoint the attorneys and/or patent agents associated with the following customer number to prosecute these applications and to transact all business in the Patent and Trademark Office in connection therewith:

Customer Number: 26502

<u>Appl. Serial No.</u>	<u>Filing Date</u>	<u>Attorney Docket Number</u>	<u>Confirmation Number</u>
15/341637	2016-11-02	P202253592US03	2036
15/175666	2016-06-07	P202253616US03	4150
13/906699	2013-05-31	P202253624US02	4665
14/480943	2014-09-09	P202253624US03	5718
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16/260120	2019-01-29	P202253667US05	8495
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16/043480	2018-07-24	P202253667US07	7342
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14/557744	2014-12-02	P202253625US02	9529
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14/719909	2015-05-22	P202253707US03	7955
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16/420101	2019-05-22	P202253709US02	1761
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13/708477	2012-12-07	P202253728US02	6261
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15/641300	2017-07-04	P202253728US05	8186
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14/542611	2014-11-16	P202253728US09	2137
15/013680	2016-02-02	P202253728US11	7184
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15/799859	2017-10-31	P202253728US15	9424
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14/159884	2014-01-21	P202253728US24	7501
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15/424795	2017-02-04	P202253728US27	4416
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14/720807	2015-05-24	P202253728US33	9103
15/437326	2017-02-20	P202253728US34	5478
16/378375	2019-04-08	P202253728US35	4619
13/862979	2013-04-15	P202253728US40	3693
14/606093	2015-01-27	P202253728US41	3568
15/201956	2016-07-05	P202253728US42	1146
16/006103	2018-06-12	P202253728US43	9095
16/709856	2019-12-10	P202253728US44	9533
15/494721	2017-04-24	P202253756US03	5275
16/459659	2019-07-02	P202253756US04	4277
17/139982	2020-12-31	P202253756US05	8147
16/239491	2019-01-03	P202253757US05	1088
16/239513	2019-01-03	P202253757US08	5732
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17/033724	2020-09-26	P202253757US10	5282
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16/239502	2019-01-03	P202253757US14	5580
14/341987	2014-07-28	P202253779US02	9850
14/698430	2015-04-28	P202253779US03	1461
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13/942271	2013-07-15	P202253942US04	1648
14/812592	2015-07-29	P202253942US05	3481
15/824198	2017-11-28	P202253942US06	9426

Please direct all correspondence in the above cases to:

International Business Machines Corporation
Customer No. 26502

Date: 10/27/2022

By: 
Name: Timothy M Farrell
Title: Counsel
Reg. No. 37,321

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

26502

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

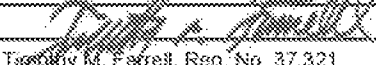
I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

International Business Machines Corporation

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorizing to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	3/10/15
Name	Timothy M. Farrell, Reg. No. 37,321		
Title	Counsel		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☒ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES
PATENT AND TRADEMARK OFFICEP.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov**ELECTRONIC ACKNOWLEDGEMENT RECEIPT**APPLICATION #
15/149,518RECEIPT DATE / TIME
01/23/2023 03:00:48 PM ETATTORNEY DOCKET #
AVAIL0109-C3**Title of Invention**

SYSTEM AND METHOD FOR APPLICATION ISOLATION

Application InformationAPPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # 9697038

CONFIRMATION # 3459

FILED BY Barbara Rasa

PATENT CENTER # 61477050

FILING DATE 05/09/2016

CUSTOMER # 84646

FIRST NAMED INVENTOR Allan Havemose

CORRESPONDENCE ADDRESS -

AUTHORIZED BY Timothy Farrell

Documents**TOTAL DOCUMENTS: 2**

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
Combined Bulk Transmittal and POA_Final.pdf	5	Power of Attorney	318 KB
P202253728US04_Signed Statement.pdf	3	Assignee showing of ownership per 37 CFR 3.73	147 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
Combined Bulk Transmittal and POA_Final.pdf	8C1E78E140B2506FE094FB5234D7F06004D1363762722570AE DB91491D0DD809985E52FE7C4D07576914E3D81B0207E8A28

3EF2ED323E1EF0ECE9ECED890F99A

P202253728US04__Signed
Statement.pdf33D402B44A7CB2119B649DF45B85CE309D40C3938A5707C18
003796791F24F89A4F3F6E80D3D4A027F2849AA94948A93AFB
B893BAAAAC15BEC08DB9357D311B0

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: International Business Machines CorporationApplication No./Patent No.: 9697038 Filed/Issue Date: 07/04/2017Titled: SYSTEM AND METHOD FOR APPLICATION ISOLATIONInternational Business Machines Corporation, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Allan Havemose To: Open Invention Network LLCThe document was recorded in the United States Patent and Trademark Office at
Reel 022531, Frame 0595, or for which a copy thereof is attached.2. From: Open Invention Network LLC To: International Business Machines CorporationThe document was recorded in the United States Patent and Trademark Office at
Reel 061365, Frame 0571, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet(s).☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature

Timothy M. Farrell

Printed or Typed Name

01/19/2023

Date

37321

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/149,518	05/09/2016	Allan Havemose	P202253728US04

CONFIRMATION NO. 3459

POA ACCEPTANCE LETTER

26502
 INTERNATIONAL BUSINESS MACHINES CORPORATION
 IPLAW IQ0, B/256-3
 1701 NORTH STREET
 ENDICOTT, NY 13760



Date Mailed: 02/07/2023

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/23/2023.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ylueng/



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/149,518	05/09/2016	Allan Havemose	AVAIL0109-C3

CONFIRMATION NO. 3459**POWER OF ATTORNEY NOTICE**

OC000000137314339

84646
 OPEN INVENTION NETWORK LLC
 900 West Bethany Drive
 Suite 380
 Allen, TX 75013

Date Mailed: 02/07/2023

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/23/2023.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ylueng/
